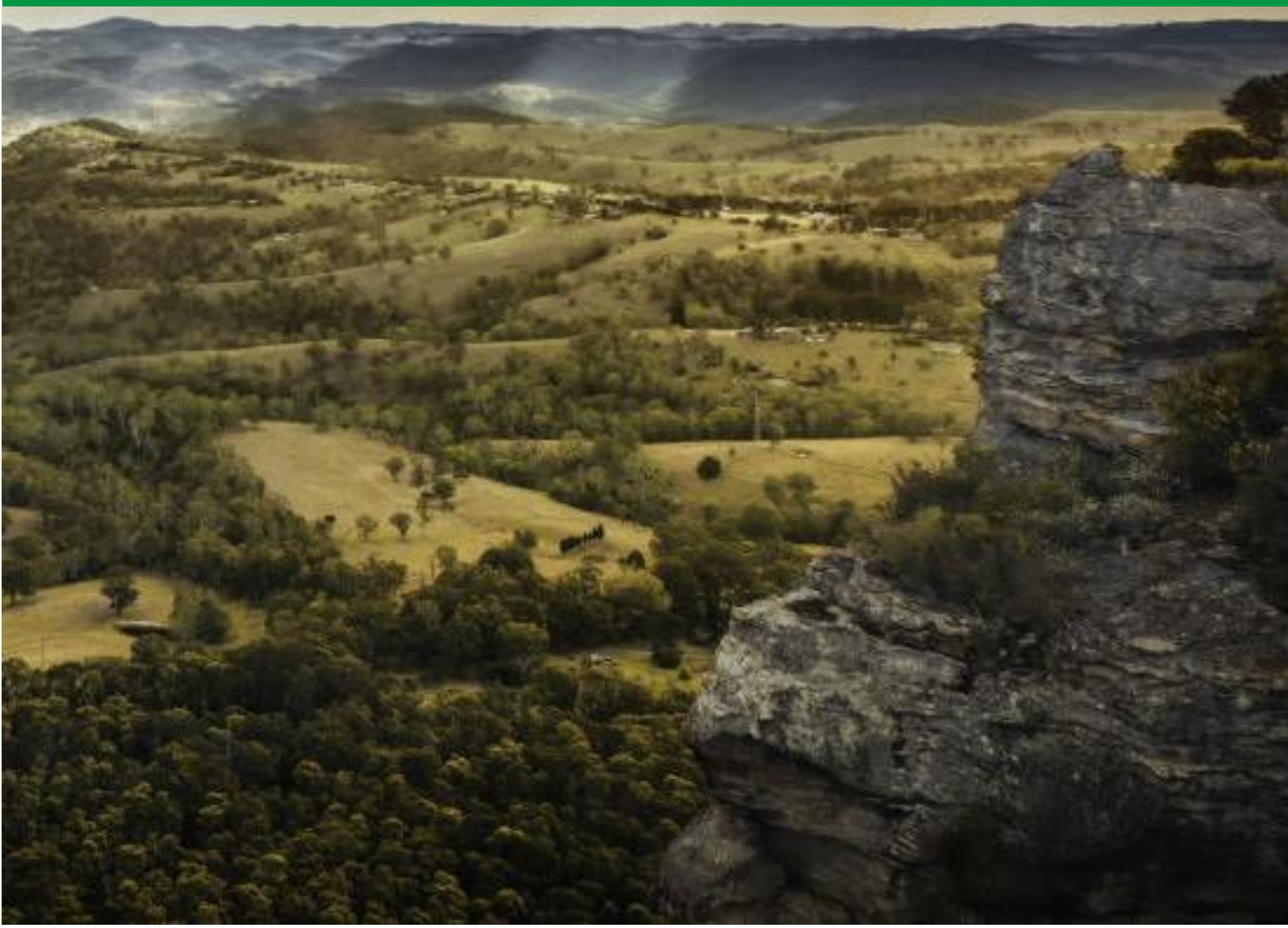
Lithgow City Council

Development Control Plan 2021

Chapter 3:

Natural Environment & Hazards



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Document Control

Version	Date in Force	Date Approved by Council	Notes
1.0	1 September 2021	26 July 2021	Commencement
2.0	17 November 2021	25 October 2021	Corrected flood planning clause to refer to 5.21 of LLEP 2014 and included the areas in Pottery Estate which contain moderate and high ecological constraints as declared vegetation for the purposes of Part 3 of the SEPP (Vegetation in Non-Rural Areas) 2017.

Title Page: The picture on the title page is from Hassans Walls Lookout (Source: Destination NSW - https://www.visitnsw.com/destinations/blue-mountains/lithgow-area/lithgow).

3.1 Introduction

3.1.1 Application of this Chapter

A range of environmental opportunities and constraints exist and affect human activities and development across the Lithgow **LGA** and some of these are addressed in this Chapter.

Council's **DA Guide** explains how you can find out if your Site is affected by any of these matters including through a range of NSW Government websites including, but not limited to:

a) **Lithgow Local Environmental Plan 2014 (LLEP14)** at www.legislation.nsw.gov.au;

b) NSW Planning Portal at www.planningportal.nsw.gov.au;

c) Additional references provided in the relevant Sections of this Chapter below.

3.1.2 Other Relevant Chapters of this DCP

Please remember that this Chapter of the DCP is unlikely to contain ALL of the relevant controls for your development. Please see DCP *Chapter 1 – Introduction & Administration* to review the Section on *How to Use this DCP* including the *Structure of the DCP* (see table below) to determine what other Chapters may be relevant to your development. **IF YOU ARE UNSURE, PLEASE DISCUSS THIS WITH COUNCIL STAFF PRIOR TO LODGING YOUR APPLICATION.**

The DCP has the following Chapters:

Chapter 1:	Introduction & Administration
Chapter 2:	Site Requirements
Chapter 3:	Natural Environment & Hazards **(THIS CHAPTER)**
Chapter 4:	Heritage & Cultural Conservation
Chapter 5:	Subdivision & Roads
Chapter 6:	Residential Development
Chapter 7	Commercial, Community & Industrial Development (including Advertising/ Signage for all relevant land uses)
Chapter 8:	Rural & Other Land Uses
Chapter 9:	Pottery Estate Precinct

3.1.3 Exempt & Complying Development

Please note that *State Environment Planning Policy (Exempt and Complying Development Codes) 2008* (**Codes SEPP**) may permit certain development set out in that policy without requiring a development application to Council if it complies with the requirements of the **Codes SEPP**. Please discuss this with Council or visit the NSW Government Planning Portal.

3.2 Bush Fire Prone Land

Application of this Section

This section applies to all land that is mapped as bush fire prone land within Lithgow Local Government Area (**LGA**) on the **Bush Fire Prone Land Map(s)** (as amended or replaced).

To find out if your land is **bush fire prone land** (and this Section applies) *please see Council's* **DA Guide,** *the NSW Planning Portal on the internet at www.planningportal.nsw.gov.au and the Rural Fire Service website (www.rfs.nsw.gov.au).*

There may also be instances where land is not identified as bush fire prone on the ***Bush Fire Prone Land Map*** *but a bush fire risk is still present (i.e., the mapping does not guarantee the risk) so development may need to consider appropriate locations, design and construction to manage bush fire risk.*

A bush fire assessment report from a suitably qualified consultant may need to be submitted with a development application for certain development on bush fire prone land to demonstrate compliance with these requirements.

Objective(s)

O1. To meet the statutory requirements for bush fire protection in NSW.

O2. To prevent the loss of life and property due to bush fire by providing for development compatible with bush fire hazard.

O3. To ensure risks associated with bush fire are appropriately and effectively managed while having due regard to development potential, on-site amenity and protection of the environment and ecological values of the site and adjoining lands.

Control(s)

Where a proposed development is on land identified as bush fire prone on the **Bush Fire Prone Land Map**, the design and management of any proposed development on that bush fire prone land complies with the following:

1) *Rural Fire Act 1997* (NSW) & the associated *Rural Fires Regulation 2013* (as amended); and

2) NSW Rural Fire Service (2019) *Planning for Bush Fire Protection* (**Bush Fire Guidelines**).

3) Any development application involving the erection of a dwelling house or alterations and additions to an existing dwelling house on bush fire prone land addresses the requirements contained in:

   a) The NSW Rural Fire Service (RFS) publication titled "*Building in Bush Fire Prone Areas Single Dwelling Applicants Kit*" found on the RFS website (www.rfs.nsw.gov.au); and

   b) *Australian Standard AS3959 – 2009 Construction of Buildings in Bush Fire Prone Areas* (for any Construction Certificate application). A suitably qualified person may need to provide a schedule of compliance with the applicable construction standards. This schedule will form part of the approval documentation and the applicant will be required to comply with it during the course of construction; and

4) **National Construction Code (NCC)** may specify additional controls for the construction of buildings on bush fire prone lands.

3.3 Vegetation Management & Biodiversity

Application of this Section

This Section applies:

1) To the clearing of vegetation in all areas that is proposed in association with a **Development Application (DA)**;
2) To the clearing of specified vegetation in non-rural areas being land in Zones E2 Environmental Conservation, E4 Environmental Living, SP2 Infrastructure, SP3 Tourist, RE1 Public Recreation, R5 Large Lot Residential, RU5 Village & W2 Recreational Waterways.

*This DCP is primarily concerned with clearing associated with development that requires consent under Part 4 of the **EP&A Act** so other approval requirements may not be covered.*

*This section provides guidance on when and how Council will require an applicant to address the biodiversity and vegetation requirements (noting that there may be additional requirements for clearing not associated with either Part 4 or Part 5 of the **EP&A Act**) including, but not limited to:*

*1) Biodiversity Conservation Act 2016 (**'BC Act'**) & associated regulations;*

*2) State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 (**'Vegetation SEPP'**) that regulates the clearing of native vegetation in areas zoned for urban purposes or for environmental conservation/management (i.e., areas not covered by the Local Land Services Amendment Act 2016). The **Vegetation SEPP** regulates:*

   *a) Native vegetation above the **Biodiversity Offset Scheme (BOS)** threshold;*

   *b) Vegetation below the **BOS** threshold where a proponent would require a permit from Council if that vegetation is identified in the Council's DCP (see Section 3.3.2).*

*3) Local controls in **LLEP2014** that review local issues including:*

   a) Clause 7.4 – Terrestrial biodiversity; and

   b) Clause 7.6 – Riparian land and watercourses.

The biodiversity assessment and approval pathways are dependent on the purpose, nature, location and extent of the vegetation clearing and whether the clearing is associated with native or non-native vegetation. The following flowchart summarises the various approval pathways.

There may be exemptions to the requirements of this Section, for example, if the proposed development is fulfilling the purpose of a subdivision that was approved prior to 25 August 2017 in an urban zone including Zone R1 to R4, RU5, B1 to B8 or IN1 to IN3.

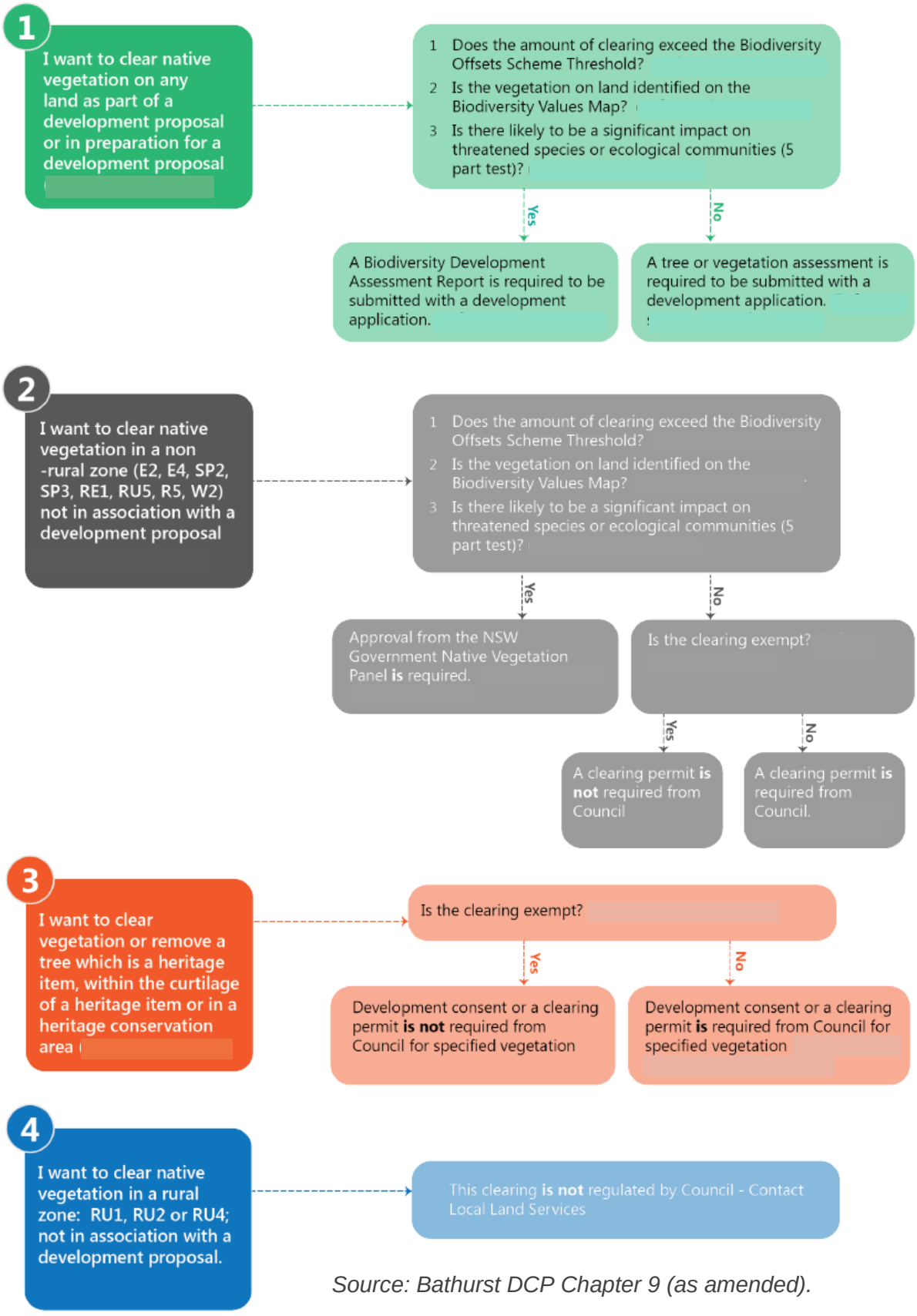
***Native vegetation** is defined in the LLS Act Part 5A, Division 1, Section 60B.*

***Note: Native vegetation clearing** is defined under Schedule Part 5A, Division 1 Section 60B and 60C of the Local Land Services Act 2013 (LLS Act).*

***Biodiversity** includes plant and animal life.*

*This section does not constitute legal advice as to responsibilities under the NSW Local Land Services Act 2013, Biodiversity Conservation Act 2016, or **Vegetation SEPP**.*

Biodiversity Approval Pathways – To satisfy the relevant biodiversity legislation/policies, it is first necessary to determine the relevant approval pathway / legislation in accordance with the flow diagram below.



Source: Bathurst DCP Chapter 9 (as amended).

Objective(s)

1) To protect and enhance significant **native vegetation**, ecological corridors/processes, **biodiversity** and native flora/fauna (particularly threatened species or ecological communities) in the Lithgow **LGA** for the benefit of both the natural environment and human sustainability.
2) To encourage retention (where possible) of native and other vegetation that can improve environmental outcomes, provide amenity and character, act as a buffer to development, and improve the sustainability of development.

Control(s)

3.3.1 Vegetation Clearing for Development Requiring Consent

If vegetation clearing is associated with a development that requires development consent under Part 4 of the EP&A Act then the test is *'whether the proposed development is likely to have any biodiversity impacts (clearing and/or prescribed) on threatened species and/or threatened ecological communities'* – using the steps set out below.

The **Biodiversity Offsets Scheme (BOS) Threshold** is a test used to determine when it is necessary to engage an accredited assessor to apply the **Biodiversity Assessment Method (BAM)** to assess the impacts of a proposal in a **Biodiversity Development Assessment Report (BDAR)**.

If you are required to obtain a **BDAR**, the conditions of an approval or consent will likely require you to retire biodiversity credits. The requirement to obtain a **BDAR** and for the conditions of a consent or approval to require the retirement of biodiversity credits is part of what is described as the **Biodiversity Offsets Scheme (BOS)**.

The *Biodiversity Conservation Regulation 2017* sets out threshold levels for when the **Biodiversity Offsets Scheme (BOS)** will be triggered. If clearing and other impacts exceeds the triggers, the **Biodiversity Offset Scheme (BOS)** applies to the proposed development including biodiversity impacts prescribed by clause 6.1 of the *Biodiversity Regulation 2017*.

If the BOS is not triggered, the **test of significance** detailed in *Section 7.3* of the *Biodiversity Conservation Act 2016* is used to determine whether a local development is likely to significantly affect threatened species.

You can also use the NSW Government *Bio Assessment & Approvals Navigator* to determine if they need a BDAR at https://www.olg.nsw.gov.au/biodiversity-assessment-and-approvals-navigator.

3.3.1.1 Step One (1): Mapping - Biodiversity Values Map

The **Biodiversity Values (BV) Map** identifies land with high biodiversity value (defined by *Clause 7.3(3)* of the *Biodiversity Conservation Regulation 2017*) that is particularly sensitive to impacts from development and clearing. If any part of your proposed development takes place on land identified as having **'Biodiversity Values'** on the **BV Map** then a **BDAR** will be required.

> *The relevant 'parts' of a proposed development includes any land required for buildings, landscaping, access roads, bush fire asset protection zones, fencing and any associated infrastructure whether temporary or permanent.*

Applicants should:

- Login to the **Biodiversity Values Map and Threshold (BMAT) Tool** at https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap
- Accept the *Terms of Use*
- Click on the *'Start Here'* blue button and in the pull-down menu click on either *'Search by Land Parcel by Lot/DP'* or *'Search address'* and input the details of your property OR Zoom (scroll using mouse) into the map to the Subject Site
- Check whether any **Biodiversity Values** are shown on the Site and the **BV Map** Criteria.

3.3.1.2 Step Two (2): Identify the Location & Impact of Proposed Development

If there is any chance that the Proposed Development is likely to be located in a biodiversity area on the **BV Map**, then the applicant should prepare the following to provide detailed evidence of the location and impact of the Proposed Development:

1) A **Site Plan** that shows:
   a) The site boundaries and rough contours or terrain;
   b) Existing buildings and structures of the land;
   c) The location of any watercourses or vegetated areas;
   d) The location of any **Biodiversity Values** or **Sensitive Biodiversity** from the map noted above;
   e) Where all proposed building(s) or work(s) are to be located;
   f) The area of land/vegetation to be disturbed including any **Asset Protection Zone(s)** (if required) for bush fire protection.

   This may need to be based on a **Survey Plan** to locate these items and the affected vegetation;
2) A report (prepared by a suitably qualified consultant) that describes the vegetation to be cleared including likely species, number, estimated height and condition supported by photographs and calculates the area of affected vegetation in accordance with the regulatory requirements. This may need to be based on an **Arborist Report** if there is any doubt about the species and their condition.
3) There may be a number of exemptions for vegetation clearance under the **Vegetation SEPP** or other legislation. However, you may need to satisfy Council that any exemption applies.

3.3.1.3 Step Three (3): BOS Threshold

The **Biodiversity Offset Scheme (BOS) Thresholds** applies to all land, not just land affected by the **BV Map**. The next step is to check the **Minimum Lot Size (MLS)** in **LLEP2014** on the **Lot Size Map** for the Subject Land and then compare it to the **Area Clearing Threshold** in the table below.

If the thresholds are exceeded then a **BDAR** will be required unless there are specific exemptions (e.g., Category 1 land under the LLS Act). The applicant is required to demonstrate if the thresholds are not exceeded.

The area threshold varies depending on the minimum lot size (shown in the Lot Size Maps made under the relevant Local Environmental Plan (LEP)), or actual lot size (where there is no minimum lot size provided for the relevant land under the LEP).

Minimum lot size associated with the property	Threshold for clearing, above which the BAM and offsets scheme apply
Less than 1 ha	0.25 ha or more
1 ha to less than 40 ha	0.5 ha or more
40 ha to less than 1000 ha	1 ha or more
1000 ha or more	2 ha or more

Source: *https://www.olg.nsw.gov.au/biodiversity-assessment-and-approvals-navigator*

3.3.1.4 Step Four (4): Significant Impacts on Threatened Species

Even if the area cleared does not exceed the **Biodiversity Offsets Scheme (BOS)** thresholds or affect **Biodiversity Values** on the **BV Map**, the applicant will need to satisfy the **test of significance** for determining whether a development or activity is likely to significantly affect threatened species under **Part 7 of the BC Act**.

In the context of a Part 4 development (not including major projects), if the **test of significance** assessment indicates that there will be a significant impact, then a **BDAR** will be required. The test of significance is also required to be applied for Part 5 activities.

See *Section 3.3.2 – Threatened/Endangered Species/Ecological Communities* of this DCP (below) for more details.

3.3.2 Threatened/ Endangered Species/ Ecological Communities

1) Council may require additional information, such as a **Flora and/or Fauna Survey** and/or **Vegetation Management Plan** in the following circumstances:
   a) The proposed development is likely to have an impact on matters of National environmental significance under the (Commonwealth) *Environment Protection and Biodiversity Conservation Act 1999*; or
   b) There is evidence that **Threatened Species** and/or **Endangered Ecological Communities (EEC)** have previously been identified on or near the Site and the proposed development is likely to have an impact on those species/communities; or
   c) The proposed development involves clearing of native vegetation of high ecological value, including wetlands and/or riparian vegetation; or
   d) Ecological assessment of the proposed development is required under *State Environmental Planning Policy No.44 – Koala Habitat Protection*.
2) A **Flora and/or Fauna Survey** is an ecological study of a specific area of land that may be incorporated in a **Statement of Environmental Effects**, **biodiversity assessment**, **species impact statement** or **environmental impact statement** but should be prepared by a suitably qualified consultant that:
   a) Addresses industry best practice in accordance with relevant guidelines/policies including, but not limited to:
      i) NSW Government's *Threatened Species Assessment Guidelines*;
      ii) *SEPP No.44 – Koala Habitat Protection*.
   b) Documents the components of biodiversity confirmed to be present within the study area;
   c) Documents the components of biodiversity not confirmed, but likely to be present within the study area;
   d) Assesses the extent and nature of likely impacts of planning, land management or development proposals on the components of biodiversity referred to above and particularly matters of national, state, regional, or local significance;
   e) Makes recommendations as to how any planning, land management or development proposals relating to the study area and/or subject site should be dealt with or modified so as to avoid unacceptable impacts on biodiversity.
3) Notwithstanding any element of this Chapter, if the clearing of vegetation will cause damage to habitat of a threatened species or ecological community or cause harm to an animal that is threatened, part of a threatened ecological community or a protected plant or animal, a **Biodiversity Conservation Licence** is required under the *Biodiversity Conservation Act 2016*.

   However, a **Biodiversity Conservation Licence** is not required if:
   a) A clearing permit or development consent is issued by Council; or
   b) An approval is granted from the **Native Vegetation Panel**; or
   c) The clearing is otherwise authorised under other legislation, such as the *Local Land Services Act 2013* (refer to *Part 2 of Biodiversity Conservation Act 2016*).

3.3.3 LLEP2014 – Terrestrial Biodiversity

Application of this Section

This Section applies whenever proposed development within the Lithgow Local Government Area (**LGA**) is on land identified as:

1) '*Biodiversity'* on the Environmentally Sensitive Areas '*Biodiversity Overlay Map'* in **LLEP2014;**
2) Within 40m of the top of bank of each watercourse on land identified as '*Sensitive Waterway'* on the Environmentally Sensitive Areas - **'***Water Overlay Map'* in **LLEP2014**.

This section seeks to protect significant native vegetation and biodiversity that may not be protected under the *Biodiversity Conservation Act, Local Land Services Act, or the* **Vegetation SEPP**.

To find out if your land is affected by this clause, please go to the NSW Planning Portal on the internet at www.planningportal.nsw.gov.au*, or consult Council's* ***DA Guide****.*

For sites identified as **'Biodiversity'** *we suggest that the applicant speaks to Council to access mapping provided by the NSW Government that identifies more specific reasons for the biodiversity significance. This may include, but is not limited to:*

a) Endangered Ecological Communities (EEC);

b) Areas where < 30% of that vegetation type is remaining;

c) Areas where less than 1000ha of that vegetation type is remaining;

d) Vegetation on over-cleared landscapes; or riparian vegetation.

*The applicant should also check the NSW Government BIONET Atlas (*www.bionet.nsw.gov.au*) which is a repository for biodiversity data including species sightings, surveys, and threatened biodiversity. You may require assistance by a suitably qualified consultant to assess this information and determine the likelihood of species on the subject site.*

Control(s)

1) **Lodgement Requirements:** For all development (excluding single dwellings, alterations and additions, or other minor development) where any native trees (with a height greater than 6m and/or breadth of trunk greater than 600mm at 1m from ground level) are proposed for removal then Council may require:
   a) For vegetation clearance of 1-10 native trees – an assessment in the **Statement of Environmental Effects** of the likely impact of the vegetation removal on biodiversity; threatened species and ecological communities; and ecological corridors possibly supported by an **Arborist Report** addressing the species and condition of the trees; or
   b) For any greater clearance of native trees - a **Flora and/or Fauna Assessment** or **Vegetation Management Plan** prepared by a suitably qualified ecologist or flora/fauna specialist to demonstrate that the proposed development will address the requirements of **LLEP2014**.
2) **Disputing Mapping:** Where the applicant wishes to dispute the mapping, it is demonstrated (including photographic and aerial photo evidence) either that:
   a) The mapping is incorrect in that the identified area does not have any significant native vegetation or likely biodiversity (e.g., it is worked agricultural land/ buildings/ water storage -

with photographic evidence clearly showing the location) or is not native vegetation (this may require species listing); or

b) That the proposed development (and any impacts from that development on the site) will not be in close proximity to or impact significantly on any sensitive area highlighted by the proposed mapping.

3) **Site Investigation:** Where:

a) It is unclear whether there is any significant native vegetation from the photographic evidence; or

b) It is unclear whether the development will be in proximity to sensitive biodiversity and/or significant vegetation on recent aerial images; or

c) There is other relevant evidence requiring further investigation,

then Council may conduct a preliminary site investigation (site visit) to assess the potential for impact from the proposed development. It is advisable to seek this advice from Council prior to lodgement of your application to reduce any delays.

At this point Council may advise that no additional justification is required if there is minimal impact or the vegetation removal is unlikely to significantly impact the specific biodiversity issue that is mapped OR they may request additional consultant studies to address this matter.

Council and the applicant may have regard to any recent aerial photos of the site in making this decision as well as the other controls in this Section.

Proximity to significant vegetation may create other hazards (e.g., bush fire risk) that may increase the expense of development so suitable setbacks to existing vegetation are recommended.

3.3.4 Clearing NOT Associated with Development (Non-Rural Zones)

If the vegetation to be cleared is NOT associated with development requiring consent and is above the **BOS Threshold** and covered by the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* (**Vegetation SEPP**) then applicants address the steps in *Section 3.3.2* of this DCP above. The **Vegetation SEPP** generally applies to urban and non-rural zones including Village, Residential, Business, Environmental, Industrial, Infrastructure, Recreation and Waterways Zones.

Your property may be able to use the 10/50 clearance rules without approval. Please see the RFS website (www.rfs.nsw.gov.au) for more details.

3.3.5 Clearing NOT Associated with Development (Rural Zones)

If the vegetation to be cleared is:

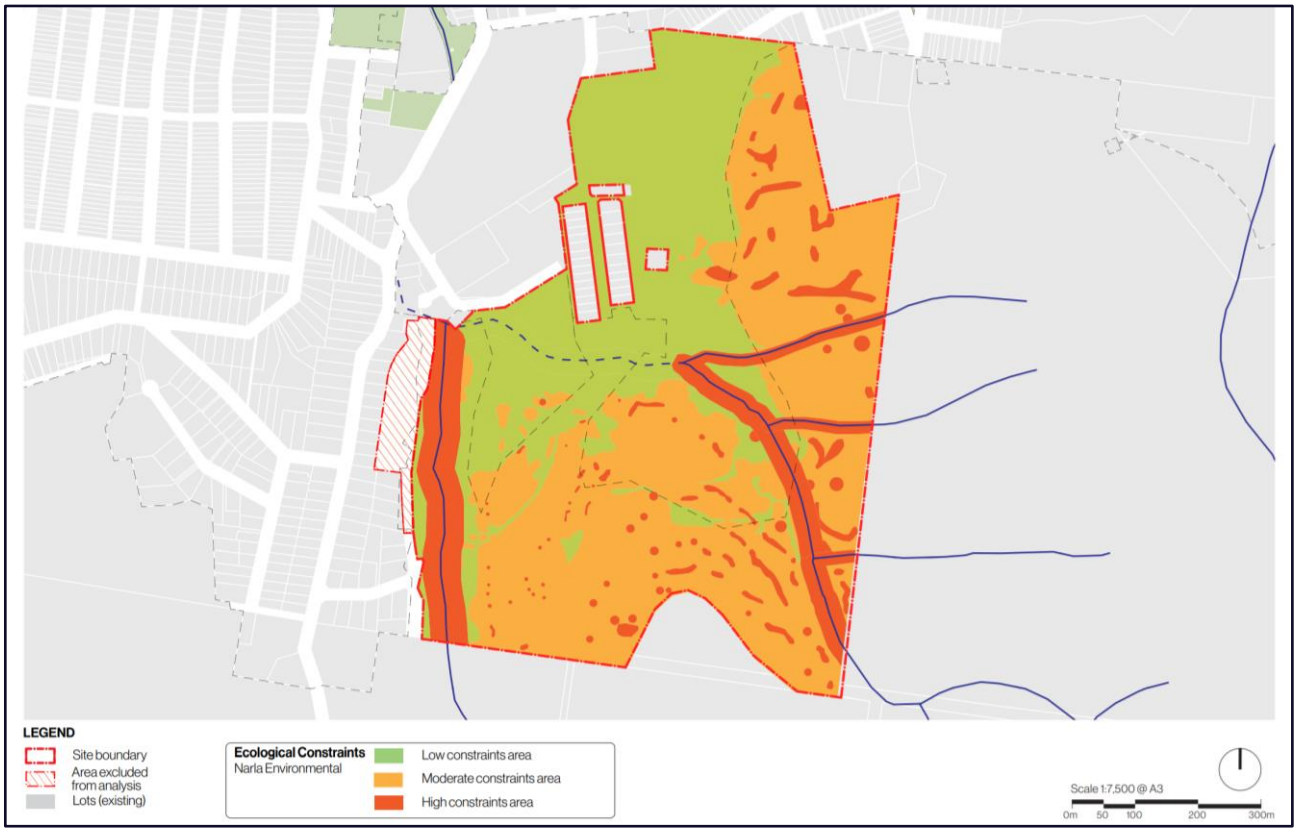
- NOT associated with a development requiring consent; and
- Is within a **Rural and/or Environmental Zone** in the Lithgow **LGA**; or
- Is within a **Deferred Zone** (e.g., Portland Foundations Site);

then it should consider the relevant approval pathway under the *Local Land Services Act 2013* (LLS Act), particularly **Part 5A – Land Management (native vegetation)**, noting Council does not provide this approval.

3.3.6 Declared Vegetation in this DCP

At the time of preparing this DCP, Council does not have a Tree Protection Orders (TPOs). Areas contained within the areas identified as moderate or high ecological constraint in the map below (**Figure 10** of Chapter 9) is declared vegetation for the purposes of Part 3 of the State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017.

Clearing within these areas not associated with development nor exceeding the BOS threshold will require a permit to be issued by Council prior to any clearing taking place.



3.3.7 Tree Removal Criteria

1) Regardless of *Section 3.3.6 Declared Vegetation in this DCP*, Council may take into consideration any or all of the following criteria when assessing an application involving clearing of vegetation (including native and non-native vegetation) whether it is associated with a development or not:

   a) **Description**: The application includes:

      i) **Site Plan**(s) showing the location of the vegetation to be cleared supported by a **Survey Plan**;

      ii) A description of the vegetation to be cleared (type & condition) (possibly supported by an **Arborist Report**) with photos of the relevant trees and justification addressing the points below.

b) **Condition:** Condition of the tree/vegetation (may need to be justified by an **Arborist Report**) including:
   i) Potential life of the tree and whether it is deteriorating or declining;
   ii) Whether the tree is severely stressed, diseased or is suffering insect damage without the opportunity for remediation/mitigation;
   iii) Whether the growth habit or mature size of a tree is undesirable;
   iv) Whether the tree shows poor form, shape and/or vigour typical to the species;
   v) The significance and rarity of the tree/vegetation species (local/regional/national);

c) **Ecology/Amenity:** Whether the removal of the vegetation has the potential:
   i) To directly or indirectly affect a threatened species, population, ecological community or their habitats;
   ii) To have an adverse impact on the amenity or scenic environmental quality of the locality;

d) **Assets:** Protection of Assets (may need to be justified by a suitably qualified person) including:
   i) Whether the removal of the vegetation is necessary to create an Asset Protection Zone (APZ);
   ii) Whether the vegetation is causing structural damage to a building, structure, pipe or sewer;
   iii) Whether the branches are dangerous and extend over a building or adjoining property and cannot be resolved by reasonable pruning to retain the vegetation;

e) **Medical:** Whether the applicant has provided a medical certificate from a clinical immunologist/allergy specialist that states that the pruning or removal of the vegetation is necessary for maintaining quality of life;

f) **Approvals:** Whether any previous condition of development consent required the retention of the vegetation;

g) **Replacement:** Whether the proposal involves the planting or replacement of suitably mature vegetation.

2) **Exemptions:** Council is satisfied (based on evidence provided by the applicant) that:
   a) The clearance satisfies the exemptions in the **Vegetation SEPP** (where applicable);
   b) The vegetation is dead or dying and is not required as the habitat of native animals;
   c) The species is a weed or non-native invasive species;
   d) The vegetation is a risk to human life or property;
   e) Clearance is authorised under other legislation;
   f) The vegetation is within 3m of a lawful dwelling;
   g) Clearance is in accordance with an approved vegetation plan or conservation agreement.

3) **Unacceptable Reasons:** The following reasons are generally not acceptable to justify tree/vegetation removal:
   a) Shedding of flowers, leaves, bark, twigs, fruit and sap causing nuisance;
   b) Animals (insect, bird, bat, possum etc.) that inhabit the tree causing nuisance;

c) Damage to underground services where there are reasonably feasible alternatives to mitigate and retain the tree;

d) Construction of fences;

e) Minor heave (lifting) of paths, paving, fences and minor structures where there are reasonably feasible alternatives to mitigate and retain the tree;

f) Tree does not suit the existing or proposed landscape;

g) Unsubstantiated fear of tree failure;

h) Tree removal for fire hazard reduction, where the property is not within a bush fire prone area as defined by the *Rural Fire Services*;

i) Tree is considered to be too large or high;

j) To enhance amenity (other than solar access) or views;

k) To increase solar access unless sufficient evidence is provided.

3.4 Land & Soils

Application of this Section

This Section applies wherever site investigations or state or local government mapping indicates there may be contaminated lands or geological, soil classification/types or salinity that may affect the proposed development or where the proposed development may impact significantly on the stability and quality of land and soils.

Issues that may affect parts of Lithgow LGA include, but are not limited to: steep lands and lands with (potential for) significant erosion; rocky outcrops; poorer quality or depth soils that may limit agricultural uses; and salinity.

Any NSW Government publicly-accessible mapping and/or known affected areas through site analysis and previous reporting will be used to determine the presence of these issues.

3.4.1 Contaminated Land

*This Section directly relates to requirements under the Contaminated Land Management Act 1997 (& regulations) and State Environmental Planning Policy No. 55 – Remediation of Land (**SEPP 55**) that provides procedures to deal with the assessment of known or potentially contaminated land, the remediation of contaminated land, and development that may contaminate land.*

Objective(s)

O1. To enable Council to more adequately identify, record and manage known and potentially contaminated land in accordance with legislative and state policy requirements.

O2. To ensure the applicant reviews the historical uses of a site to identify risks from potentially contaminating land uses.

O3. To ensure development sites have a suitable soil/water quality for their intended use and that any proposed development of an identified contaminated site will not result in any unacceptable levels of risk to human health or the environment.

O4. To ensure contaminated sites are remediated to a suitable level for their intended purpose and protection of the natural environment.

O5. To avoid or minimise the risk of future contamination of sites from proposed development.

O6. To ensure asbestos or other hazardous material waste (if present on the site) are managed in accordance with the requirements set out in *Section 2.9.1 Hazardous Materials & Asbestos* of this DCP.

O7. To ensure that fill that is brought onto any site (or leaves the Site not destined for an appropriate waste facility) is uncontaminated and will not increase the risk or spread of contamination.

Controls

1) All developments demonstrate how they comply with any relevant NSW Government legislation, regulations, policies including the NSW Government/ EPA (2020) *Consultants reporting on contaminated land – Contaminated land guidelines* (**'Contaminated Land Guidelines'**).
2) All development applications provide a **Site History** review to determine if there are have been or are any potentially contaminating activities on the site or neighbouring sites that could have resulted in contamination. If there is any risk of contamination, the steps in the **Contaminated Land Guidelines** are to be followed.
3) Where any proposed development and its operation involves significant quantities of chemical or petroleum use or storage or harmful materials or waste products (in any form) on the site, the applicant demonstrates how the proposed development:
    a) Will manage and safely contain any chemicals, materials or wastes on the site and/or during their disposal or transport to/from the site in accordance with the relevant regulations;
    b) Is designed to minimise or mitigate the risk of contamination to land, surface and ground water, or ecological systems both during normal operations and if in the event the normal systems fail;
    c) Addresses relevant clauses in **LLEP2014** including (where applicable), but not limited to:
        i) *Clause 7.5 – Groundwater vulnerability*;
        ii) *Clause 7.6 – Riparian land and watercourses*.
4) If cut and/or fill will result in the net export or import of fill to/from the site, the applicant notifies Council in the application and demonstrates the fill is not contaminated. Council may require a **Soil Analysis Report and/or Contamination Review / Site History** to ensure that only clean fill or virgin excavated natural material (VENM) is utilised on site or taken to another site.

3.4.2 Sensitive Land Areas

This section applies to all land identified as *'Sensitive Land Areas'* on the *Environmentally Sensitive Areas – Land Overlay Map* where *Clause 7.7 Sensitive Lands* in **LLEP2014** applies.

> *The maps are provided on the NSW Planning Portal at* www.planningportal.nsw.gov.au*,*

Objective(s)

To avoid, minimise or restrict development of land (consistent with *Clause 7.7 - Sensitive Lands* **LLEP2014**) on:

1) Unsuitably steep slopes or shallow soils;
2) Land subject to soil salinity (where it cannot be mitigated through construction techniques);
3) Land where there is significant vegetation that is critical to land stability and soil quality;
4) Land subject to permanent inundations; and/or
5) Land with a high proportion of rock outcropping.

Control(s)

In order to satisfy the requirements of *Clause 7.7 - Sensitive Lands*, particularly *subclause (4)* that:

a) The development is designed, sited and will be managed to avoid significant adverse environmental impact, or

b) If that impact cannot be avoided—the development is designed, sited and will be managed to minimise that impact, or

c) If that impact cannot be minimised—the development will be managed to mitigate that impact,

the applicant should consider and address the following steps that Council will follow in assessing impacts on sensitive lands:

3.4.2.1 Step One (1): Identify the Nature of the Sensitive Lands:

If the land (or part of the land affected by the proposed development) is identified as *'Sensitive Lands* on the '*Environmentally Sensitive Areas – Land Overlay Map* in **LLEP2014**, then the applicant should discuss with Council the nature of that sensitivity and whether there is any mapping anomaly. If the applicant can demonstrate that the mapping is obviously incorrect Council may waive further steps. However, if there is any doubt, applicants should conduct a **Preliminary Site Investigation** under *Step Two (2)* below.

For sites identified as 'Sensitive Lands' we suggest that the applicant speaks to Council to access mapping provided by the NSW Government that identifies more specific reasons for the biodiversity significance. This may include, but is not limited to:

a) Steep lands (gradient exceeding 18 degrees);

b) Severe to extreme sheet and rill erosion;

c) Land capability Classes V, VI, VII, & VIII (poorer quality or shallow soils);

d) Rocky outcrops.

Proximity to sensitive areas may create other hazards (e.g., land slip and drainage issues) that may increase the expense of development so suitable setbacks to sensitive lands are recommended.

3.4.2.2 Step Two (2): Preliminary Site Investigation

1) **Site Plan:** The applicant provides a **Site Plan** (including survey and contour information and/or photographic and aerial photo) providing evidence that details the following:
   a) The proposed development including the extent and location of all proposed buildings and works that could disturb or impact on the land/soils;
   b) The site boundary and existing buildings/significant features (ideally based on a **Survey Plan**) and/or overlaid on a recent aerial photograph;
   c) The location of any known *sensitive land area(s)* using both NSW Government mapping and/or local knowledge; and
   d) Drainage lines, watercourses, and land that is regularly inundated.
2) **Impact:** The applicant demonstrates that the proposed development (and any impacts from that development on the site) will not be in close proximity to or impact significantly on any **sensitive land(s)**.

3) **Site Investigation:** Where:

a) It is unclear whether there are any significant sensitive land areas from the photographic or other evidence; or

b) It is unclear whether the development will be in proximity to a sensitive land area; or

c) There is other relevant evidence requiring further investigation,

then Council may conduct a preliminary site investigation and/or site visit to assess the potential for impact from the proposed development. It is advisable to seek this advice from Council prior to lodgement of your application to reduce any delays.

At this point, Council may advise that no additional justification is required if there is minimal impact or the proposed development is unlikely to significantly impact the sensitive land issue that is mapped. However, if there is any doubt (or Council has insufficient information/ expertise), the applicant will need to address *Step Three (3)* below.

3.4.2.3 Step Three (3): Significant Sensitive Land Impacts

Where there is risk of significant impact on *sensitive lands*, then Council may require a plan and/or report prepared by a suitably qualified consultant (examples set out in *Sections 3.4.3 & 3.4.4* below) to demonstrate that the proposed development will address the requirements of **LLEP2014**. This requires detailed evidence that the impacts can be avoided, minimised or mitigated by the proposed development.

3.4.3 Erosion & Sedimentation

Objective(s)

O1. To ensure that the quality of stormwater run-off from development of sites with a geological or soil-related issue does not impact on the natural environment and receiving waters in terms of soil erosion, sedimentation, water and groundwater pollution, and other impacts.

O2. To maximise the amount of existing significant vegetation retained on a site during construction and operation of the development to minimise soil erosion and sedimentation of watercourses.

Control(s)

Erosion of land through poor land management and development practices can result in significant sedimentation and water quality issues in watercourses and drainage corridors.

The applicant addresses (where relevant) the relative risk of certain developments causing erosion and sedimentation in accordance with the requirements of Landcom, Fourth Edition (2004) *Managing Urban Stormwater: Soils and Construction* ('Blue Book') (as amended) including, but not limited to:

a) Assessment of site constraints and opportunities;

b) Management of soils/earthworks;

c) Vegetation retention and enhancement;

d) Management of water;

e) Sediment and waste control; and

f) Site access, stabilisation and maintenance.

*Council may place conditions of consent on development to comply with the requirements of the 'Blue Book' and Council's **DA Guide** in accordance with the risk of erosion and/or sediment leaving the site in the following order of risk (low to high):*

- *Implement sediment & erosion control measures during construction;*
- *Lodge with Council (for approval) an **Erosion & Sediment Control Plan**;*
- *Lodge with Council (for approval) a more detailed **Soil & Water Management Plan**.*

3.4.4 Other Geological or Soil-Related Issues

Objective(s)

O1. To encourage proposed development to be appropriately sited and/or designed to address site constraints from geological or soil related issues.

O2. To ensure that the natural environment is suitably protected from inappropriate development locations and/or construction methods that impact regionally significant geological formations.

Control(s)

In addition to the requirements for erosion & sedimentation above, where there is evidence of any geological or soil-related issue(s) that may impact on the suitability of a site for development, its proximity to adjacent development, and/or the method of construction then:

1) The **Statement of Environmental Effects** and any relevant plan(s) give consideration to the impacts of the geological or soil related issue and document how the proposed development will address those issues and minimise or mitigate any risk;
2) The extent of any impact(s) on the geology or soil should be shown clearly on any:
    a) **Site (Analysis) Plan(s)** – See requirements in *Section 3.4.2.2* above;
    b) **Earthworks Plan(s)** – showing the extent and volume of cut and/or fill; and
    c) **Soil and Water Management Plan(s)** – showing how water will be managed to minimise erosion and provide sediment control.
3) Council may require a suitably qualified engineer to provide:
    a) A **Geo-Technical Report** that analyses the geology, soils and possibly the hydrology (water) of the site to determine the risk(s) and how the proposed development will minimise or mitigate any impacts; and/or
    b) **Engineering / Structural Plan(s)** to ensure appropriate structure and stability of development.

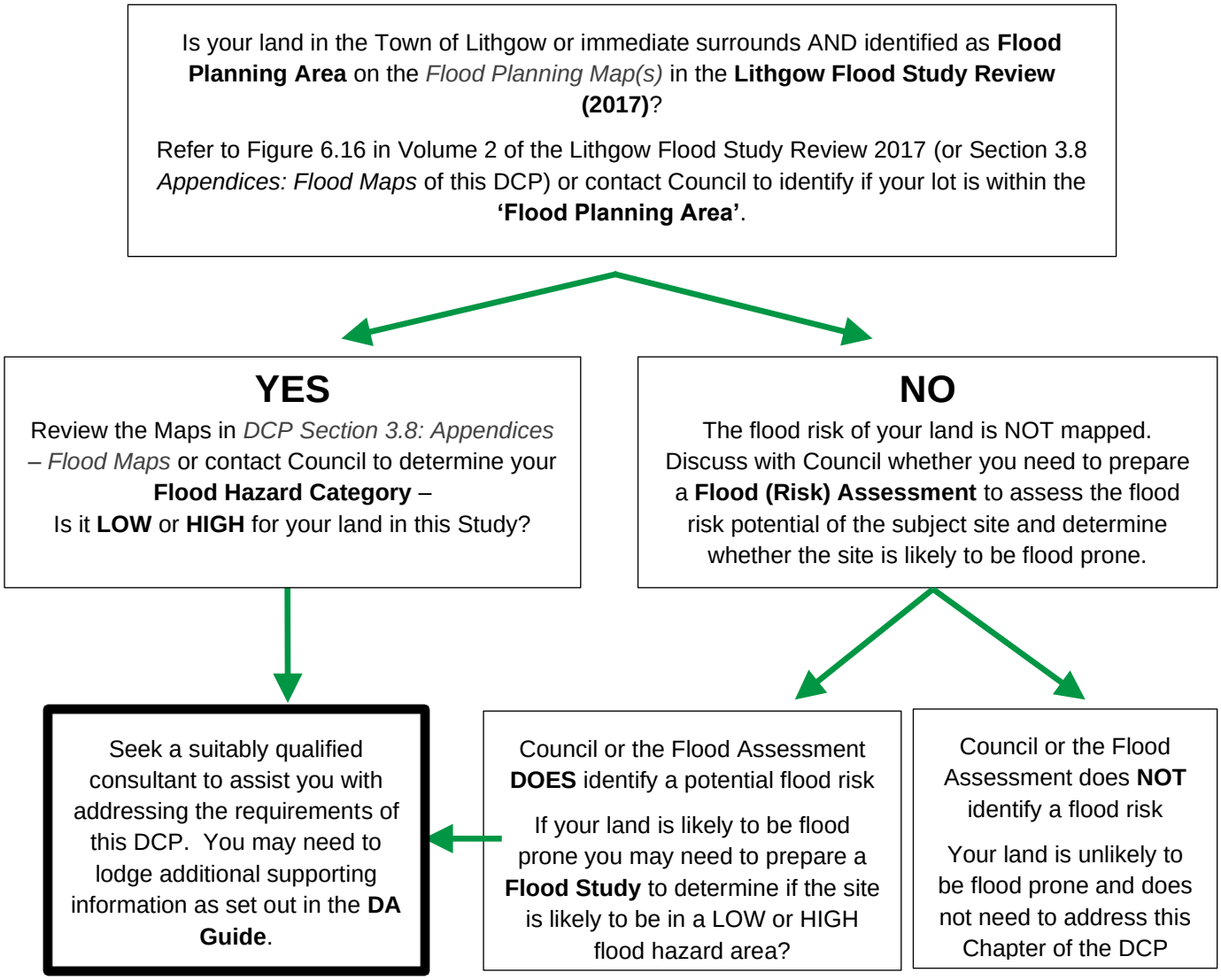
3.5 Flood Prone Land

Application of this Section

This Section shall apply to all land within the Lithgow Local Government Area (**LGA**) to which *Clause 5.21 - Flood planning* of **Lithgow Local Environmental Plan 2014** ('**LLEP2014**') applies including any land identified or known by Council to have the potential for flooding under that clause. If the requirements in **LLEP2014** are inconsistent with this DCP then **LLEP2014** prevails to the extent of any inconsistency.

Flow Chart

The flow chart below aims to assist an understanding of when and how to use this Section.



*The flood planning area shown on the **Flood Planning Map(s)** in **LLEP2014** is the 1-in-100-year flood level taken from the Kinhill Engineers Pty Ltd (1991) Lithgow Floodplain Management Study.*

*Subsequently, Council has adopted the Lyall & Associates (2017) Lithgow Flood Study Review ('**Flood Study**'). This is now the current Flood Study that informs the determination of some flood prone lands (see*

the Maps in Section 3.8 – Appendices: Flooding Maps, and the maps in LLEP2014 will be updated subsequently.

*Council is in the process of preparing a Flood Risk Management Study & Plan (**FRMS&P**) that will evaluate options for managing the flood plain and may change flood risk. At this time more detailed flood controls may be added to this DCP.*

If your land may be affected by flood-related controls, we highly recommend that you seek advice from a Planning or Hydraulic (Flood) Consultant and/or a Council Officer as it is a complex issue. Council offers Pre-Lodgement Meetings to provide advice before you spend significant money on preparing detailed development application(s) or consultant reports.

Objective(s)

O1. To promote awareness of potential flood risks associated with the use and development of land (including mapping of flood risk) and inform the community of Council's flood policy.

O2. To manage flood risk through appropriate development controls for development at or below the relevant **Flood Planning Level (FPL)**.

O3. To avoid detrimentally increasing the potential flood affectation on other development or adjacent properties by significantly modifying flood characteristics.

O4. To avoid unduly sterilising land where flood compatible uses are appropriate and a design response can minimise flood impacts.

O5. To ensure construction methods and materials on flood liable land are compatible with flooding and flood conveyance.

O6. To ensure new development does not impose significant additional burdens on, or risk to, State Emergency Services (SES) or other emergency personnel during flood emergencies.

Relationship to other Planning Policies & Instruments

This Plan is to be read alongside the relevant controls in **LLEP2014**, Council's **Engineering Guidelines**, any adopted **Flood Study** as well as other NSW Legislation, State Policies and Guidelines applying to flood liable land including, but not limited to (as amended):

a) *Environmental Planning & Assessment Act 1979* and associated Regulations;

b) NSW Government (2005) *Floodplain Development Manual* (**Floodplain Manual**);

c) NSW Government (2005) *Flood Prone Lands Policy*;

d) NSW Government (2007) *Flood Planning Guideline*;

e) NSW Government *Guideline on Development Controls on Low Flood Risk Areas*;

f) NSW Government (2009) *Section 9.1 Ministerial Directions* (as amended).

Exempt & Complying Development

This DCP does not affect the requirements for development of land using the rules under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* (**'Codes SEPP'**). However, the relevant flood mapping may determine which lots are 'flood control lots' (i.e., lots to which flood related development controls apply for certain uses) for the purpose of the **Codes SEPP** and may determine the minimum floor level for certain development types.

Complying development cannot occur in a floodway, flood storage area, flow path or high hazard or high-risk area. See *Clause 3D.7 (Inland Code), Clause 5A.30 (Commercial & Industrial (New Buildings and Additions) Code*, or any other relevant section of the **Codes SEPP**.

Key Definitions

Flooding is a complex issue and flood controls include a lot of specific words and definitions that affect when and how flood controls operate. Where specific flood definitions are used in this Plan, we have tried to highlight them in BOLD. When you see one of these BOLD words, we suggest you read this **Key Definitions** Section for that term. If you do not understand the flood definitions or controls please ask a Council officer for assistance.

Only key definitions used in this DCP are set out below. For an expanded list of definitions refer to the Glossary within the NSW Government's *Floodplain Development Manual* and/or Council's adopted *Lithgow Flood Study Review* (on Council's website).

Flood Levels for Application of Planning Controls

- **Flood Planning Area (FPA)** means the area of land subject to flood related development controls for residential, commercial and industrial development. **Note:** The FPA is generally determined based on land below the **Flood Planning Level ('FPL')**.
- **Flood Planning Levels (FPL)** are the combination of flood level (derived from significant historical flood events or floods of specific **Annual Exceedance Probabilities** (**AEP**s) and freeboards selected for floodplain risk management purposes, as determined in management studies and incorporated in management plans.
- **Freeboard** provides reasonable certainty that the risk exposure selected in deciding on a particular flood chosen as the basis for the **FPL** is actually provided. It is a factor of safety typically used in relation to the setting of floor levels. **Freeboard** is included in the **FPL**.

*In the Town of Lithgow, the mapped Flood Planning Level (FPL) is the 1% AEP plus 500mm freeboard for mainstream flooding. For other areas the same FPL may need to be determined by a **Flood Study.***

Flood Hazard

- **Flood hazard** is the potential risk to life and property resulting from flooding. The level of hazard varies across the floodplain due to different flood conditions (such as depth, velocity, etc.).
- **High (provisional hydraulic) hazard flood area** occurs where land in the event of a 100-year ARI (1% AEP) flood is subject to a combination of flood water velocities and depth greater than the following combinations (where damage to structures is possible and wading would be unsafe for able bodied adults):
  - 2 metres per second with shallow depth of flood water;
  - depths greater than 0.8m in depth with low velocity.
- **Low (provisional hydraulic) hazard flood area** occurs where land may be affected by floodway of flood storage subject to a combination of floodwater velocities that would not meet the **high hazard** water velocities/depths (noted above). Nuisance damage to structures is possible and able bodies adults would have little difficulty wading.

Chance of a Flood

- **Annual Recurrence Interval (ARI) (years) means** the long-term average number of years between the occurrence of a flood equal to or larger in size than the selected event. (Note: ARI is the historical way of describing a flood event. AEP (see below) is generally the preferred terminology).
- **Annual Exceedance Probability (AEP)** is the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, a 1% **AEP** flood has a 1% chance of occurring in any one year.
- **Probable Maximum Flood (PMF)** means the largest flood that could conceivably occur at a particular location; usually estimated from probable maximum precipitation, coupled with the worst flood producing catchment conditions. The **PMF** defines the extent of **flood prone land** that is the floodplain. Generally, it is not physically or economically possible to provide complete protection against this event. The average recurrence internal (ARI) for the ***PMF*** for Lithgow is approximately 1 in 10,000,000 years.

*The **Annual Recurrence Interval ('ARI')** is similar to AEP but for the purposes of this Plan they can be used inter-changeably (though AEP is the preferred term).*

ANNUAL EXCEEDANCE PROBABILITY (AEP) %	AVERAGE RECURRENCE INTERVAL (ARI) YEARS
0.2	500
0.5	200
1	100
2	50
5	20
10	10
20	5

The table adjacent shows the rough correspondence between different AEP and ARI terminology.

*It is important to understand that a 1% AEP (or 1:100 ARI) flood does **not** mean that only one flood of that level would occur every 100 years. Instead, it is the chance in any year of a flood of that level occurring.*

It is also important to note that historical floods may not have reached or exceeded the 1% AEP flood level.

Flood – General Terms

- **Catchment means** the area of land draining to a specific location. It includes the catchment of the primary waterway as well as any tributary streams and flow paths. It always relates to an area above a specific location.
- **Flood** means a relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flow paths associated with major drainage before entering a watercourse, and/or oceanic inundation resulting from super-elevated ocean levels. It excludes waves overtopping coastline defences and tsunamis.
- **Flood liable land** is synonymous with **flood prone land** and **floodplain** i.e., area of land which is subject to inundation by floods up to and including the **probable maximum flood ('PMF')** event. Note that the term **flood liable land** covers the whole floodplain, not just that part below the **Flood Planning Level**.

Types of Flooding

Different types of flooding may affect your land. Most people recognise mainstream flooding but land can also be affected by overland flooding or along natural drainage channels.

- **Mainstream flooding** (MSF) is the inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.
- **Local Drainage** issues are typically caused by direct surface runoff, surcharges and overflows from low points in kerbs, or overflows from the stormwater drainage system. They involve shallow depths with little danger to personal safety. In the FRMS&P a distinction was made between local drainage and **Major Overland Flow** (MOF) and local drainage issues are not included in the Flood Planning Area.
- **Floodway areas** are those areas of the floodplain where a significant discharge of water occurs during floods and are areas that, even if only partially blocked, would cause a significant redistribution of flood flow or a significant increase in flood levels.
- **Flood storage areas** are those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood.
- **Flood fringe areas** means that part of the floodplain remaining after the flood function areas of the floodway and flood storage areas have been defined.

*Historically, the Town of Lithgow has focussed on **mainstream flooding** along Farmers Creek and Marrangaroo Creek as covered by the Flood Study. However, it is likely that the future **FRMS&P** will extend to overland flooding that may be more extensive. Where Council is aware of this flood risk, they may require additional flood studies to assess the risk.*

General Terms

- **Australian Height Datum (AHD):** A common national surface level datum approximately corresponding to mean sea level.
- **Flood compatible materials:** Building materials that are resistant to damage when inundated by floodwaters.
- **Flood proofing:** A combination of measures incorporated in the design, construction and alteration of individual building and structures subject to flooding, to reduce or eliminate flood damages.
- **Gross floor area:** Is defined in **LLEP2014**.
- **Habitable room / floor area:** In a residential building a habitable room is a living or working area such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom. It does not include bathrooms or garages.
- **Reliable access:** The ability for people (pedestrians and vehicles) to safely access and evacuate an area defined as a maximum water depth of 300mm during certain flood events (see Matrix in Controls). Road type/construction is suitable for all weather 2WD access.
- **SES:** State Emergency Service of New South Wales.

3.5.1 Preliminary Flood Risk Assessment

PRIOR TO LODGING THE DEVELOPMENT APPLICATION, where there is any reasonable chance that the subject land could be affected by flooding (i.e., it is near a watercourse or on low-lying land), and a Flood Planning Level (FPL) has not already been determined in a Flood Study, THEN the applicant (or their consultant) should provide to Council the following in accordance with Council's **DA Guide**:

a) A **Survey Plan** from a Registered Surveyor;

b) **Plans** showing details of the proposed development based on the **Survey Plan**;

c) A **Flood (Risk) Assessment**.

COUNCIL will conduct a brief assessment of:

a) Historic flood inundation records held by Council for the site and/or surrounding area as the highest known flood (though this often does not accurately represent the 1% Annual Exceedance Probability (AEP) or Flood Planning Level and is subjective only);

b) Any (known) existing **Flood Study** or modelling undertaken for a site or for sites in the surrounding area that may provide an indication of flood levels in the area;

c) Any indicative Flood potential shown in other relevant land use strategies adopted by Council;

d) Any State Emergency Services or other relevant agency/authority mapping that may be available not just for flooding but also for dam break contingencies.

IF COUNCIL has any reasonable reason to believe that the lot (or the part of the lot where development is proposed or would be needed for access) may be:

a) affected by **mainstream flooding** or **overland flows**, and/or

b) at or below the **Flood Planning Level (FPL)**,

then it may (at its discretion based on the risk of the proposal) require further assessment of flood potential and responses (See DCP *Section 3.5.2 - Application Requirements* for more details).

Please see Council's DA Guide for the lodgement requirements for land affected by flooding. Some additional guidance is provided in the controls below.

3.5.2 Key Controls

3.5.2.1 Development at or below the Flood Planning Level (FPL)

1) All development that is at or below the Flood Planning Level (FPL) requires the consent of Council.

2) All developments shall be assessed in accordance with the latest edition of the *NSW Floodplain Development Manual* (as amended by the NSW Government).

3) Development is prohibited unless Council is satisfied that it will not increase the **flood hazard** rating or likely flood damage to any other property.

3.5.2.2 Development within High Hazard Flood Areas

1) No alteration in ground levels will be permitted, whether by excavation (cut) or filling, without the submission of a **Flood Study** and prior development consent.
2) The carrying out of any work or the erection of any structure, including fence, on land in the **High Hazard Flood Area** will only be permitted if the land is outside the **Floodway**, subject to low velocities, and is supported by a **Flood Impact Assessment (FIA)** showing that the works will have no adverse flooding affects on any other property.

3.5.2.3 Development within Low Hazard Flood Areas

1) **Low Hazard – Floodway:** No alteration in ground levels, whether by excavation or filling, will be permitted without the submission of a **Flood Study** and prior development consent. Neither the carrying out of any work, nor the erection of any structure, including fences, will be permitted in Low Hazard Floodway areas.
2) **Low Hazard – Flood Storage and Flood Fringe:** Development consent is required to be obtained prior to any activity, work or building being carried out within the **Flood Planning Area (FPL)** and a **Flood Study** may be required.
3) **Subdivision:** Subdivision for the purpose of new **residential accommodation** or **tourist and visitor accommodation** or other flood-sensitive development must demonstrate that every lot created or resulting from the subdivision is capable of providing a suitable building envelope (for dwellings a minimum of 200m^2) and access to a public road that is above the **Flood Planning Level (FPL)**.
4) **New Development – Non-Residential:** Where the proposed floor level of any building is below the **FPL**, there must be suitable area(s) available for the permanent or temporary storage of hazardous materials and valuable goods above the **FPL** and this area must be a minimum of 20% of the **gross floor area** of the building.
5) **Existing Development – Non-Residential:** Alterations and additions to existing non-residential buildings may be constructed at the same floor level as the existing building subject to compliance with the DCP *Section Construction Requirements & Flood Proofing* to the **FPL**.
6) **New Development – Residential:** New dwellings must have a floor level located at or above the **FPL**.
7) **Existing Development – Residential:** Alterations and additions to existing residential buildings that have an existing floor level below the FPL will be determined by Council on the application's merits, having regard to the following matters:
    a) Where the existing floor level is below the 1% AEP flood level, any extension at the same floor level is limited to 20% of the existing habitable floor area or 50% if it is built at or above the 1% AEP flood level;
    b) The extension is to be **flood proofed** to the FPL.
8) **Carports and Open Sheds:** Carports and open sheds below the **FPL** are constructed from **flood compatible materials** under DCP *Section Construction Requirements & Flood Proofing* and may be constructed at existing floor levels.

9) **Change of Use:** A change of use occurs when an approved use of a building is changed from one use to another use. Some flexibility is provided for commercial/industrial changes of use to facilitate re-use of existing buildings.

   a) If a change of use is from a commercial/ industrial/ other use to a residential use (or use with a residential component) then the requirements for **residential accommodation** apply.

   b) If a change of use is from a non-residential use to another non-residential use then:

      i) If there is no modification to the building footprint required as part of the change of use, existing floor levels need not be changed;

      ii) Otherwise, the requirements for non-residential uses (including alterations and additions) apply.

3.5.3 Construction Requirements & Flood Proofing

Unless it is a dwelling house or minor alterations and additions, a suitably qualified consultant may be required to certify that:

1) The proposed structure can withstand the force of floodwater, debris and buoyancy (for calculation of debris forces assume a solid object of mass 250kg travelling at a velocity of 2.0 metres/second).

2) All building or construction uses flood compatible materials as per the table below or a suitable alternative is demonstrated to achieve a similar outcome.

TABLE OF CONSTRUCTION THAT IS 'DEEMED TO SATISFY' REQUIREMENTS *This table sets out some recommended flood compatible building materials and construction methods. Use of these materials/methods is deemed to satisfy this control. If alternate materials/methods are proposed then a suitably qualified consultant verifies that they would be flood compatible as per the NSW Government policy. The use of these materials or methods does not guarantee compliance with the relevant provision of the **National Construction Code (NCC)** - to be separately confirmed.*	
FLOOD COMPATIBLE MATERIALS	
Flooring & Sub-Floor Structure	Pier and beam construction or suspended reinforced concrete slab is preferred where it can allow floodwaters to pass beneath the floor. Alternatively, concrete slab-on-ground monolith construction is permitted but clay filling is not permitted beneath this where this could be inundated.
Insulation	Foam or closed cell types.
Nails, Bolts, Hinges & Fittings	Galvanised Removable pin hinges

UTILITIES, EQUIPMENT & STORAGE	
Electrical Main Power Supply	Subject to the approval of the relevant power authority, incoming electricity mains, service equipment and meters shall be located above the **Flood Planning Level**. Means shall be available to easily disconnect the building from the main power supply or all connections are to be automatically isolated in the event of flood waters having the potential to gain access to exposed electrical circuits (internal/external of the building).
Electrical & Wiring	All wiring, power outlets, switches, etc., should, to the maximum extent possible, be located above the **Flood Planning Level**. All electrical wiring installed at or below the **FPL** should be suitable for continuous submergence in water and should contain no fibrous components. Only submersible-type splices should be used at or below the **Flood Planning Level**. All conduits located below the relevant flood level should be so installed that they will be self-draining if subjected to flooding
Equipment	All equipment installed below or partially below the **Flood Planning Level** should be capable of disconnection by a single plug and socket assembly. Should any electrical device and/or part of the wiring be flooded it should be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.
Heating Equipment & Fuel Storage	Heating and air-conditioning systems should be installed above the **Flood Planning Level**. If located below the **FPL**, heating systems using gas or oil as a fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off. Heating equipment and fuel storage tanks should be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks should be vented to an elevation of 500 millimetres above the **Flood Planning Level**. All ductwork located below the **FPL** should be provided with openings for drainage and cleaning or self-draining on a suitable grade. Where duct work must pass through a water-tight wall or floor below the relevant FPL a closure assembly operated from above the **FPL** should protect the duct-work / room.

3.6 Ground & Surface Water Protection

Application of this Section

This clause applies to land where the following Clauses of **LLEP2014** apply:

a) *Clause 7.5 – Groundwater vulnerability*; and/or

b) *Clause 7.6 – Riparian land and watercourses*; and

Any other developments / land uses that, in Council's discretion, are in proximity to a significant watercourse or sensitive groundwater system and may have potential to affect riparian lands or watercourses through significant on-site storage of significant volumes of hazardous liquids or chemicals or the production of wastes that could contaminate surface or ground water systems.

To find out if your land is affected by these clauses, please go to the NSW Planning Portal on the internet at www.planningportal.nsw.gov.au*, as described in* **Section 3.1 – Introduction** *of this DCP.*

All development should address these issues. However, it is not intended that low-impact developments (particularly in existing urban areas) are required to prepare a detailed response to these clause(s).

This may be covered by the ***Statement of Environmental Effects****, an* ***on-site effluent report****,* ***erosion & sediment control plan****, or other* ***geo-technical report*** *(where relevant).*

However, larger projects or those with potentially higher impacts to the drinking water supply system address these clause(s) in greater detail and provide supporting consultant studies (where required).

Works within 40m of a watercourse may also require a ***controlled activity approval*** *from the NSW Government under the Water Management Act 2000 & this is* ***integrated development*** *under the EP&A Act). For more information go to* http://www.water.nsw.gov.au/water-licensing/approvals/controlled-activity.

Objective(s)

The objectives for this Section are set out in *Clause 7.5 – Groundwater Vulnerability* & *Clause 7.6 – Riparian Land & Watercourses* (as applicable) of **LLEP2014**.

Control(s)

1) When a development is proposed on land where this Section applies, then the applicant is only required to address the relevant clause(s) in **LLEP2014** with additional reports in sub-section (2) below for the following land uses / development proposals that are permissible in the relevant zone:

   a) Intensive livestock agriculture;

   b) Rural industries and other industries with on-site storage or use of hazardous chemicals or significant petro-chemicals;

   c) Animal boarding and training establishments and veterinary hospitals where there are significant numbers of animals kept on-premises;

   d) Larger scale tourist accommodation and eco-tourist facilities requiring on-site sewage management;

   e) Open cut mining and extractive industries;

   f) Liquid fuel depots and service stations;

g) New cemeteries;

h) New sewerage treatment plants;

i) Other developments / land uses that, in Council's discretion, would have potential for on-site storage of significant volumes of hazardous liquids or chemicals or the production of wastes that could contaminate surface or ground water systems that feed into the drinking water supply.

Operations that store small quantities of fuel, oils or other machinery lubricants for rural or non-commercial use(s) would not be considered as posing a high risk of contamination. However, some higher impact facilities (e.g., service stations, liquid fuel depots and some other depots) will need to be discussed with Council. Compliance with specific regulations (e.g., Protection of the Environment Operations Regulations) for service stations and other liquid fuel depots may provide sufficient protection.

2) Council may require additional studies, reports or plans (prepared by suitably qualified consultant) that demonstrate the proposed development will not have a significant adverse impact on surface or groundwater systems in the drinking water catchment and this may include:

a) **Operational/Mechanical Information** including hazardous materials that will be used and processes and systems designed to prevent on-site chemicals or waste materials from adverse impacts on surface or ground-water systems (including back-up systems if standard processes fail);

b) **Site Plan(s)** including locations of the proposed development in relation to bores within 250m, on-site effluent systems, chemical and hazardous storage areas, and environmental constraints (as relevant);

c) **Geotechnical (effluent) studies** to determine the suitable types, locations and disposal areas, and impacts of on-site effluent management and any mitigation measures;

d) **Hydrological and groundwater analysis** to determine the character and qualities of ground and surface water systems, potential for recharge/impact, water monitoring systems, and any mitigation measures;

e) **Stormwater and drainage plan(s)** to direct surface water away from development;

f) **Flora and fauna reports** or **vegetation management plans** or **landscaping plans**;

g) Any other reports required to assess the risk and determine appropriate management and mitigation strategies/measures.

3.7 Mine Subsidence Risk

Application of this Section

This section applies to land identified as being within a **Mine Subsidence District** as mapped on the NSW Planning Portal at www.planningportal.nsw.gov.au.

The area around the Lithgow has a history of underground coal mining in and around the existing urban centre. Mine subsidence is the movement or vibration of the ground following the extraction of coal. Sometimes after coal is extracted from beneath the ground, the above soil and rock can fall and fill the void left behind causing movement of the ground surface.

*Subsidence Advisory (SA) NSW has adopted **Mine Subsidence Districts (Maps)** to reflect areas where there is potential for subsidence (see indicative maps on the next page). A district is a land zoning classification administered by SA NSW under the Coal Mine Subsidence Compensation Act 2017 to help protect homes and other structures from potential mine subsidence damage.*

Subsidence can occur without any effect on buildings and structures, however, sometimes damage may occur. Any home or structure that is damaged as a result of mine subsidence in NSW is eligible for compensation through SA NSW provided it has been constructed in accordance with any applicable approvals.

*There has been a **Mine Subsidence District** in place for most of the urban area of Lithgow for some time. In July 2017, an additional area to the south of Lithgow including Hassans Walls and parts of Hartley was added. The maps on the following page may be updated - so please check the latest maps through the Planning Portal.*

Objective(s)

O1. To avoid, or if not avoid, minimise or mitigate the potential impacts of mine subsidence on development to protect the safety of people and value and structural stability of assets.

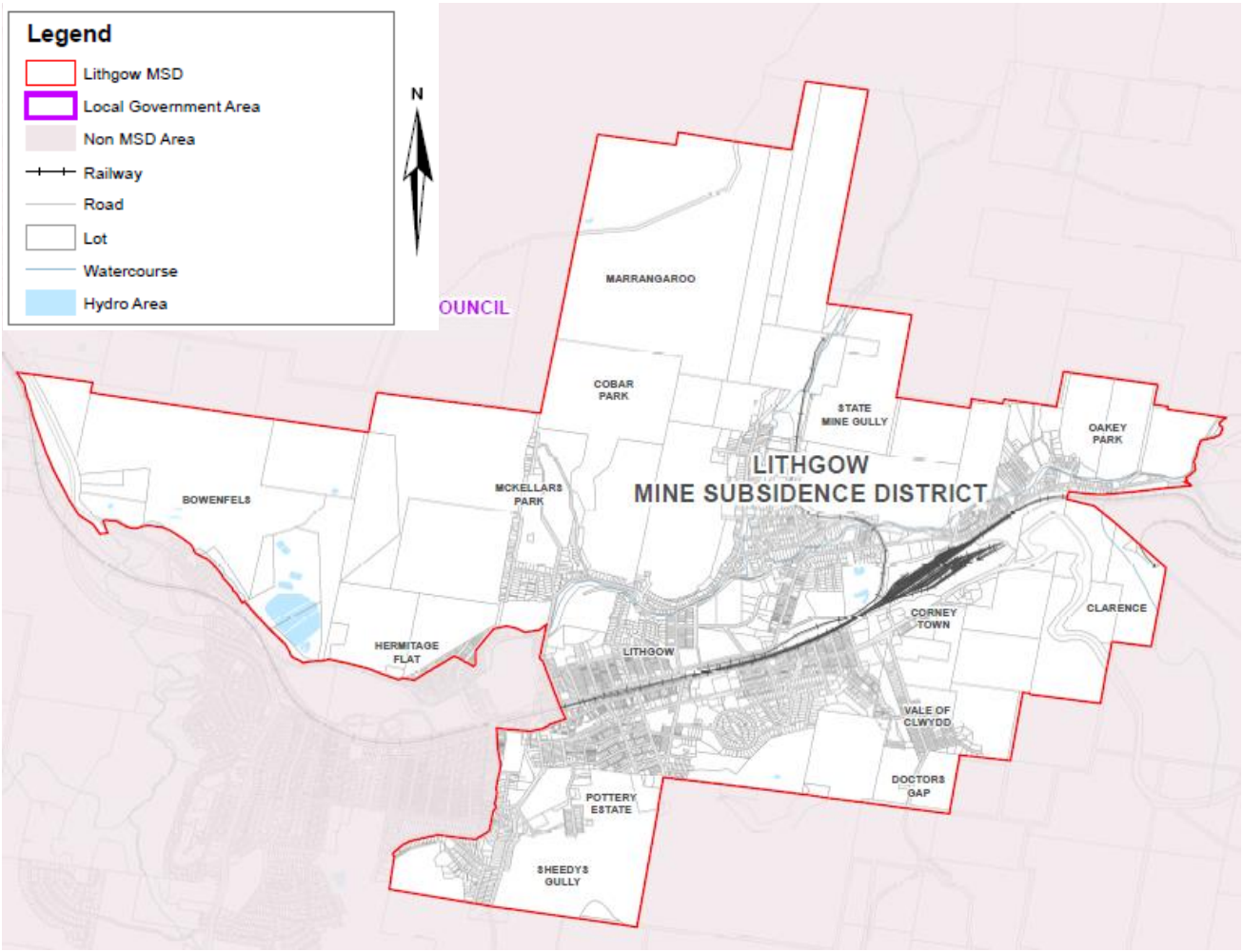
Control(s)

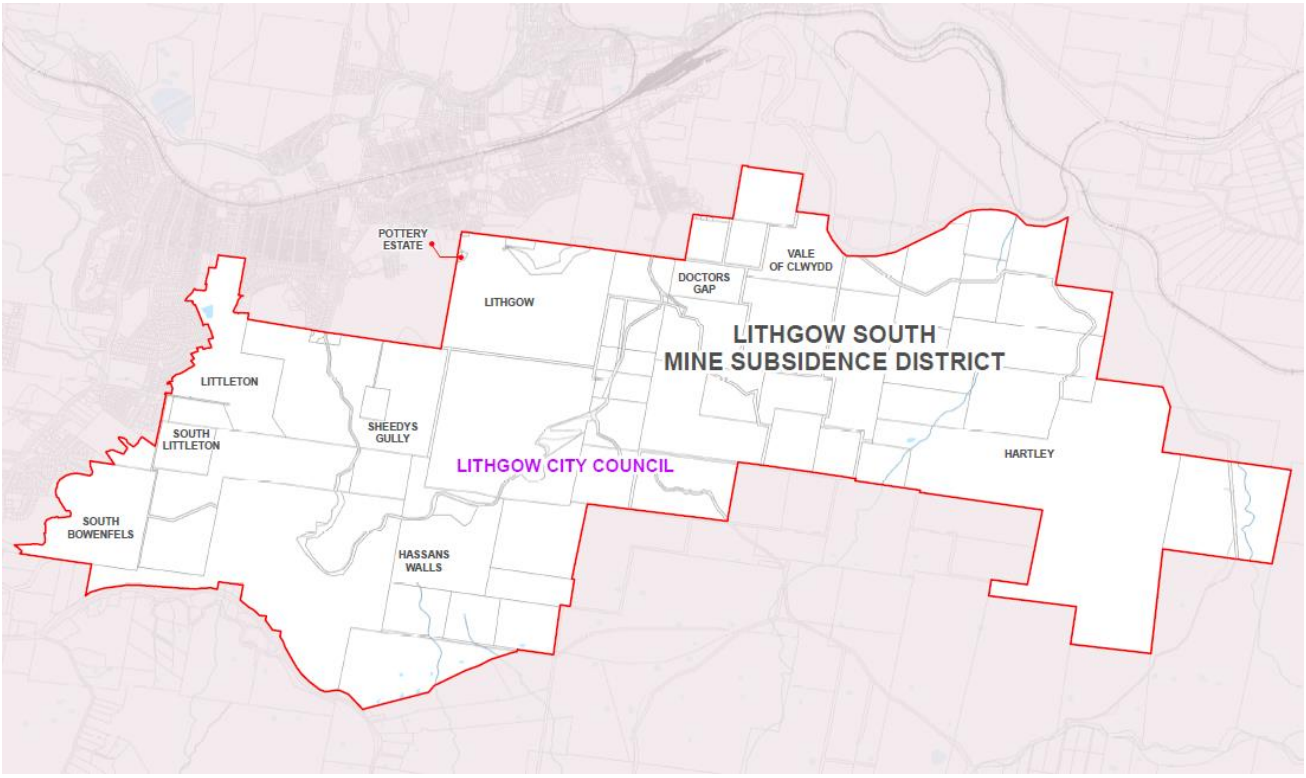
1) Any development application in a **Mine Subsidence District** considers and addresses the relevant Guideline(s) for the subject site (as amended) prepared by Subsidence Advisory (SA) NSW.

The relevant guideline for each site is found on the Planning Portal under the 'Mine Subsidence Development' tab (if the land is affected) and depends on the level of subsidence risk and active/non-active mine-workings.

2) Council or SA NSW may require additional **geo-technical studies** and/or **engineering plans and reports** to be prepared for more complex applications or where the development is unable to comply with the standard requirements under the Guidelines prepared by SA NSW.

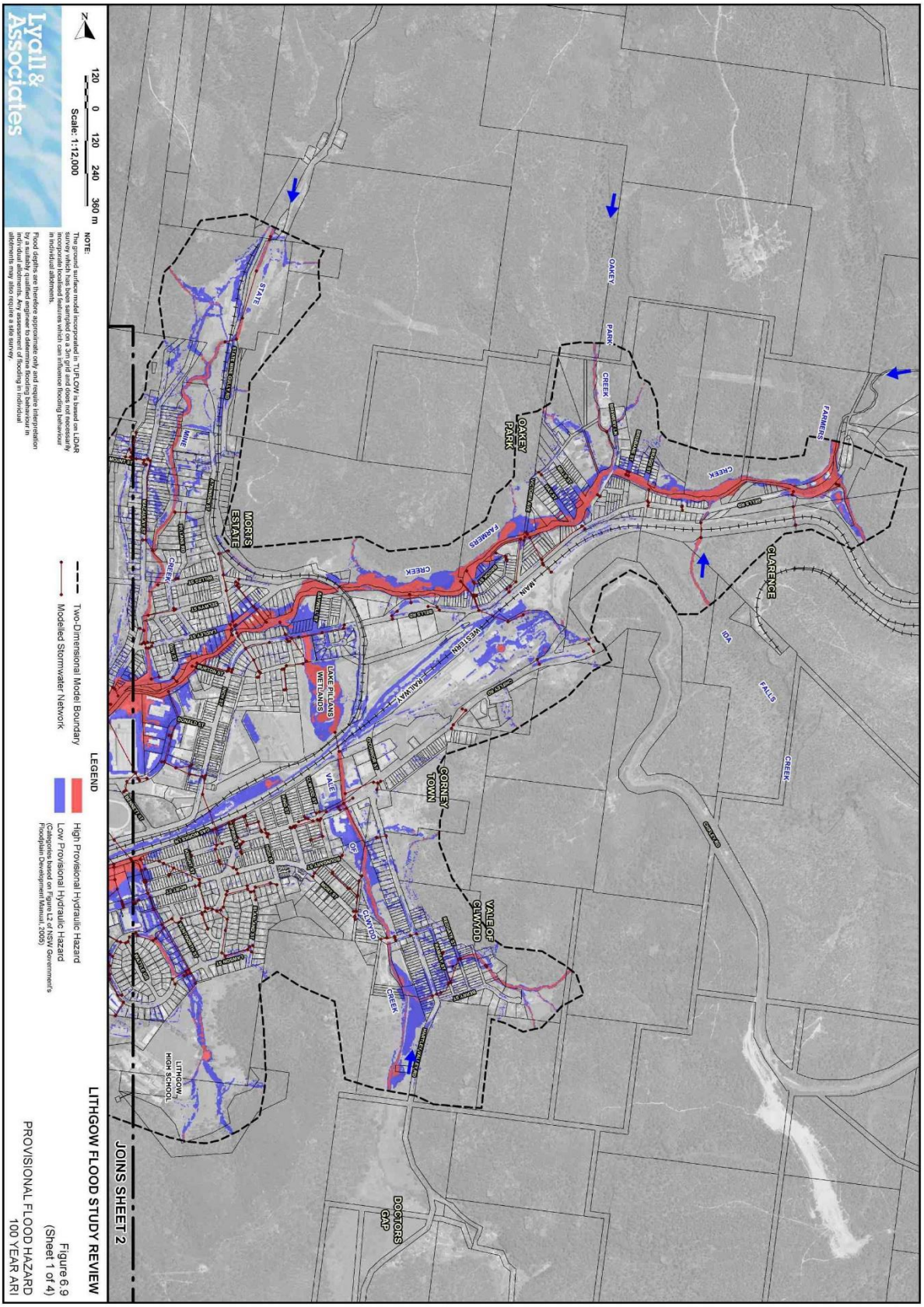
SA NSW may place conditions of consent on any proposed development to help protect it from potential subsidence damage and ensure the safety of the community. In most cases, SA NSW's development requirements for standard residential development are consistent with the Australian Building Code and do not result in increased construction costs or requirements. However, some of the complex proposals require additional studies and consideration.

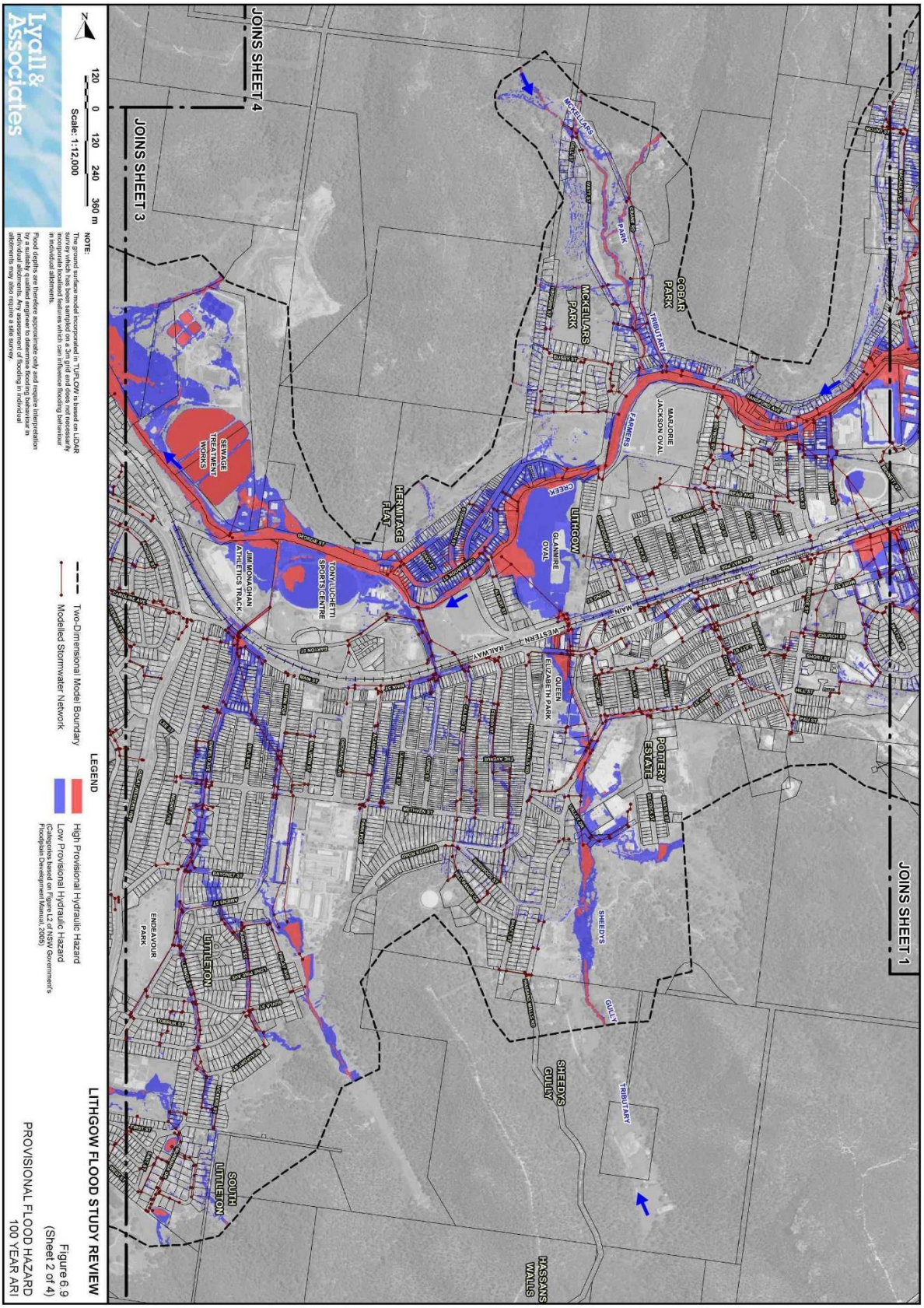


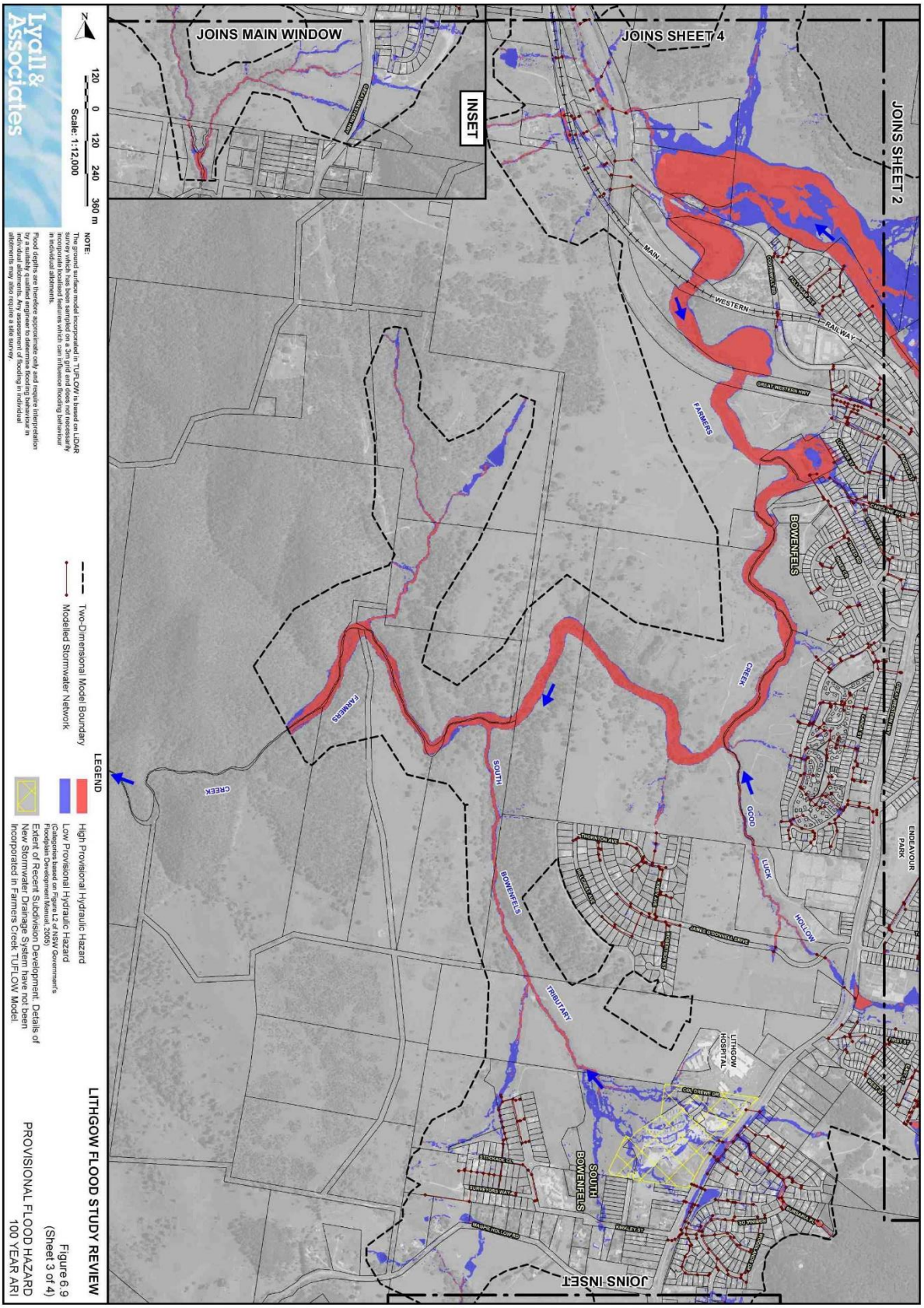


Mine Subsidence Districts in or near Lithgow (Source: Subsidence Advisory NSW website 2020).

3.8 Appendices: Flood Maps




JOINS SHEET 1
JOINS SHEET 3
JOINS SHEET 4
GOBAR PARK
MCKELLARS PARK
MARJORIE JACKSON OVAL
LITHGOW GLANMIRE OVAL
HERMITAGE FLAT
SEWAGE TREATMENT WORKS
JIM MONAGHAN ATHLETICS TRACK
TONY LUCHETTI SPORTS CENTRE
QUEEN ELIZABETH PARK
POTTERY ESTATE
SHEEDYS GULLY
HASSANS WALLS
SOUTH LITHGOW
ENDEAVOUR PARK
LITHGOW FLOOD STUDY REVIEW
LEGEND
Two-Dimensional Model Boundary
Modelled Stormwater Network
High Provisional Hydraulic Hazard
Low Provisional Hydraulic Hazard
(Classified in accordance with Appendix L of NSW Government's Floodplain Development Manual, 2005)
Scale: 1:12,000
120 0 120 240 360 m
NOTE:
The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 3m grid and does not necessarily identify all hydraulic features which can influence flooding behaviour in individual allotments.
Flood depths are therefore approximate only and require interpretation by a suitably qualified person to determine flooding in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.
Lyall & Associates
Figure 6.9
(Sheet 2 of 4)
PROVISIONAL FLOOD HAZARD
100 YEAR ARI


JOINS MAIN WINDOW
JOINS SHEET 4
JOINS SHEET 2
INSET
JOINS INSET
BOWENFELS
SOUTH BOWENFELS
FARMERS CREEK
SOUTH BOWENFELS TRIBUTARY
GOOD LUCK HOLLOW
ENDEAVOUR PARK
LITHGOW HOSPITAL
MAIN WESTERN RAILWAY
GREAT WESTERN HWY
Lyall & Associates
Scale: 1:12,000
120 0 120 240 360 m
NOTE:
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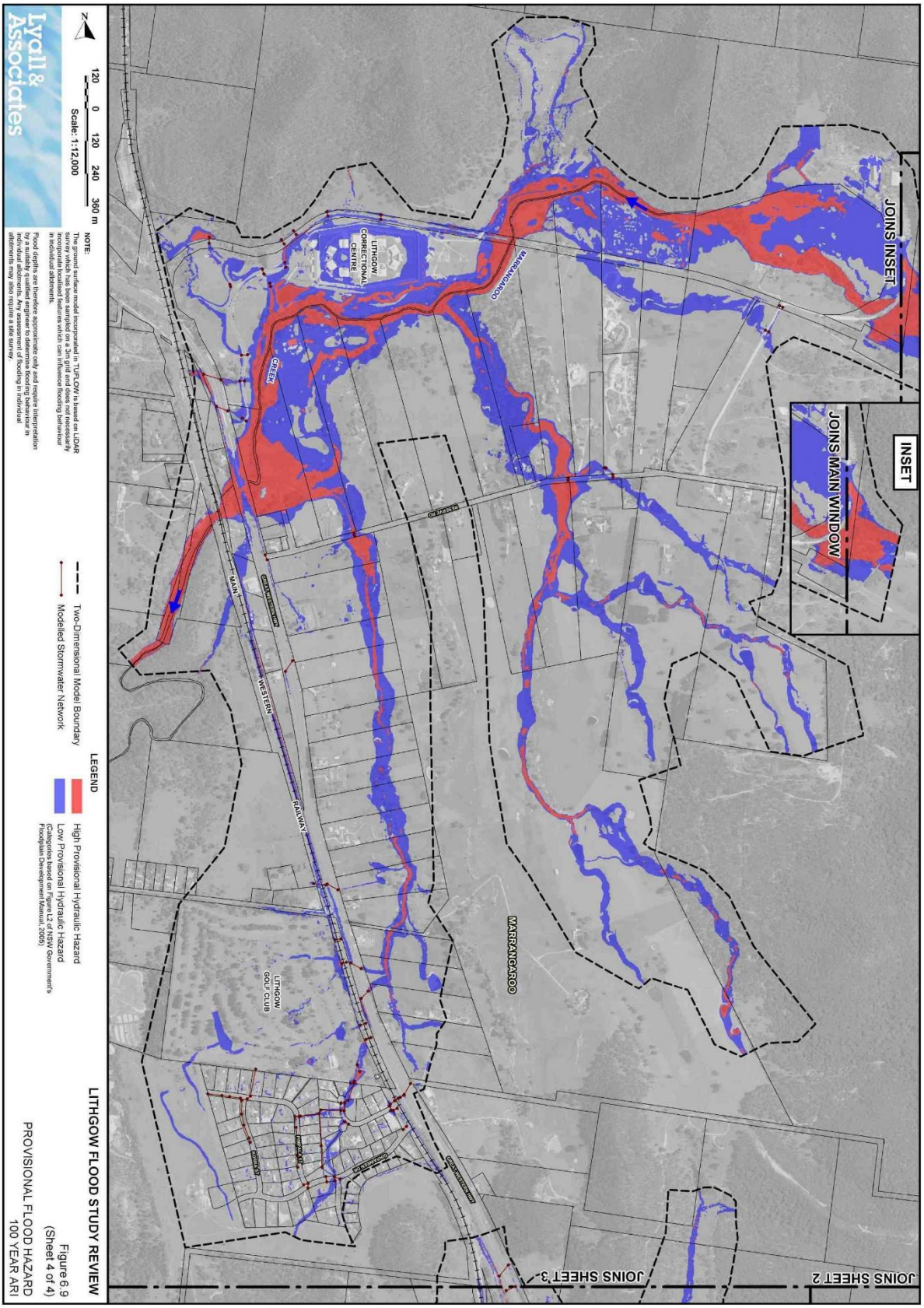
LEGEND
Two-Dimensional Model Boundary
Modelled Stormwater Network
High Provisional Hydraulic Hazard
Low Provisional Hydraulic Hazard
(Categories based on Figure L2 of NSW Government's Floodplain Development Manual, 2005)
Extent of Recent Subdivision Development. Details of New Stormwater Drainage System have not been Incorporated in Farmers Creek TUFLOW Model.
LITHGOW FLOOD STUDY REVIEW
Figure 6.9
(Sheet 3 of 4)
PROVISIONAL FLOOD HAZARD
100 YEAR ARI


JOINS INSET
INSET
JOINS MAIN WINDOW
JOINS SHEET 2
JOINS SHEET 3
LITHGOW CORRECTIONAL CENTRE
MARRANGAROO
CREEK
MAIN
WESTERN
RAILWAY
LITHGOW GOLF CLUB
MARRANGAROO
Lyall & Associates
N
120 0 120 240 360 m
Scale: 1:12,000
NOTE:
The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 3m grid and does not necessarily model all features which can influence flooding behaviour in individual allotments.
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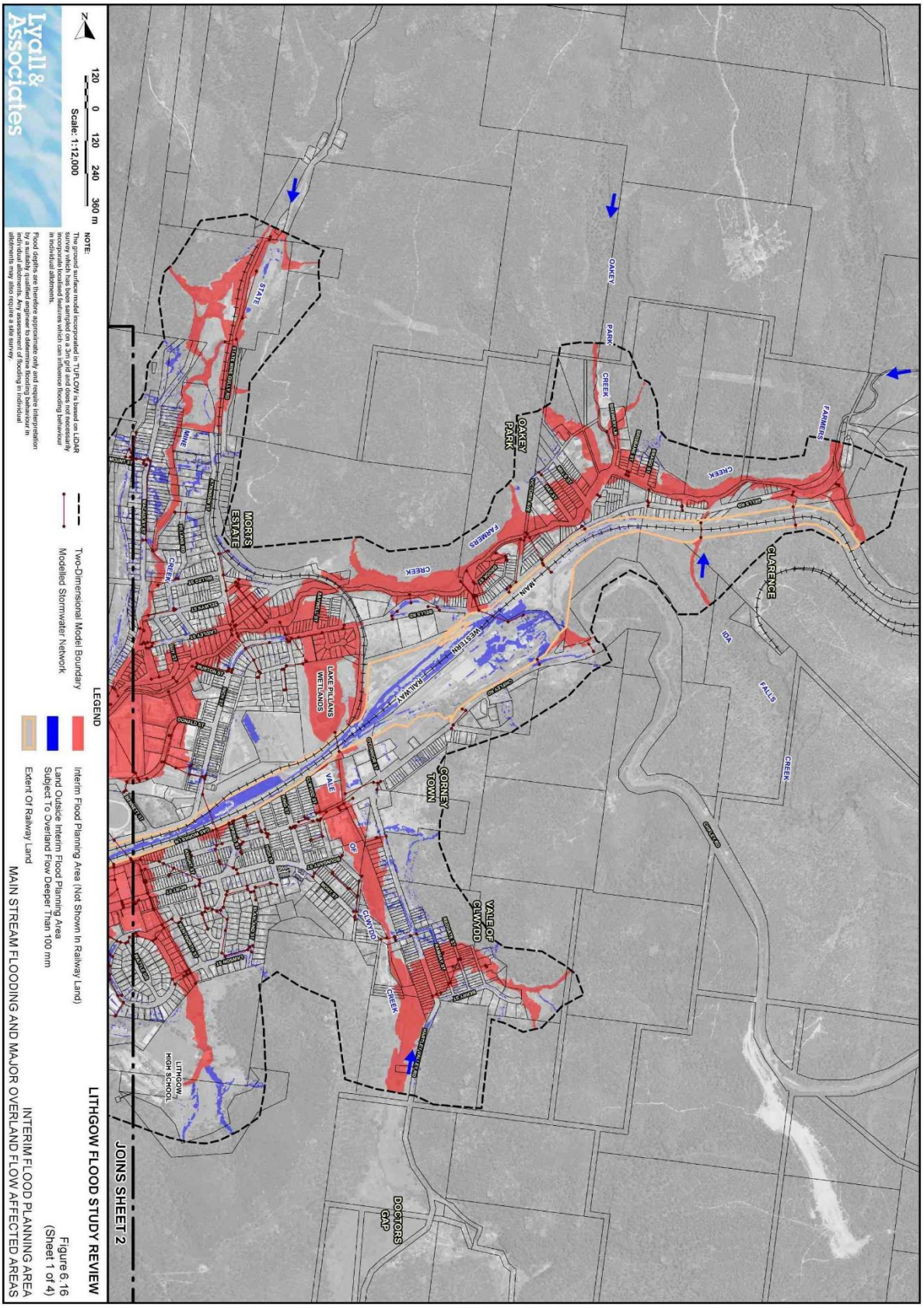
Two-Dimensional Model Boundary
Modelled Stormwater Network
High Provisional Hydraulic Hazard
Low Provisional Hydraulic Hazard
(Classified in accordance with Figure L2 of NSW Government's Floodplain Development Manual, 2005)
LITHGOW FLOOD STUDY REVIEW
Figure 6.9
(Sheet 4 of 4)
PROVISIONAL FLOOD HAZARD
100 YEAR ARI


LITHGOW FLOOD STUDY REVIEW
INTERIM FLOOD PLANNING AREA
MAIN STREAM FLOODING AND MAJOR OVERLAND FLOW AFFECTED AREAS
Figure 6.16
(Sheet 1 of 4)
Lyall & Associates
Scale: 1:12,000
120 0 120 240 360 m
N
NOTE:
The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 3m grid and does not necessarily model all features which can influence flooding behaviour in individual allotments.
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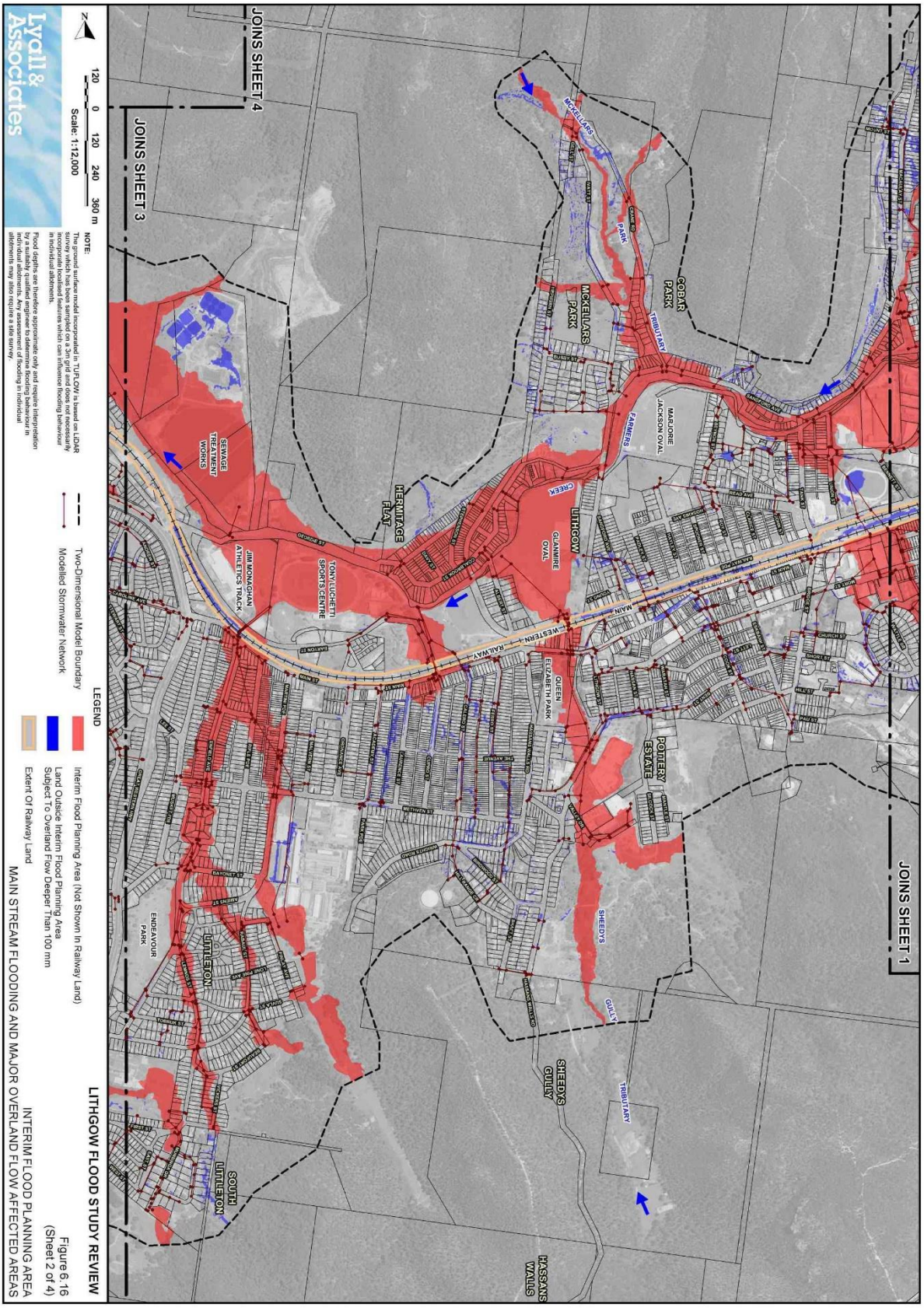
LEGEND
Two-Dimensional Model Boundary
Modelled Stormwater Network
Interim Flood Planning Area (Not Shown In Railway Land)
Land Outside Interim Flood Planning Area Subject To Overland Flow Deeper Than 100 mm
Extent Of Railway Land
JOINS SHEET 2
OAKEY PARK
OAKEY PARK CREEK
FARMERS CREEK
MAIN WESTERN RAILWAY
GLARENCE
IDA
FALLS
CREEK
MORTS ESTATE
MINE
CREEK
LAKE PILLANS WETLANDS
GORNEY TOWN
VALE
OF
CLWYDD
VALE OF CLWYDD
CREEK
LITHGOW HIGH SCHOOL
DOCTORS GAP


JOINS SHEET 1
JOINS SHEET 3
JOINS SHEET 4
GOBAR PARK
MCKELLARS PARK
MARJORIE JACKSON OVAL
LITHGOW GLANMIRE OVAL
HERMITAGE FLAT
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TONY LUCHETTI SPORTS CENTRE
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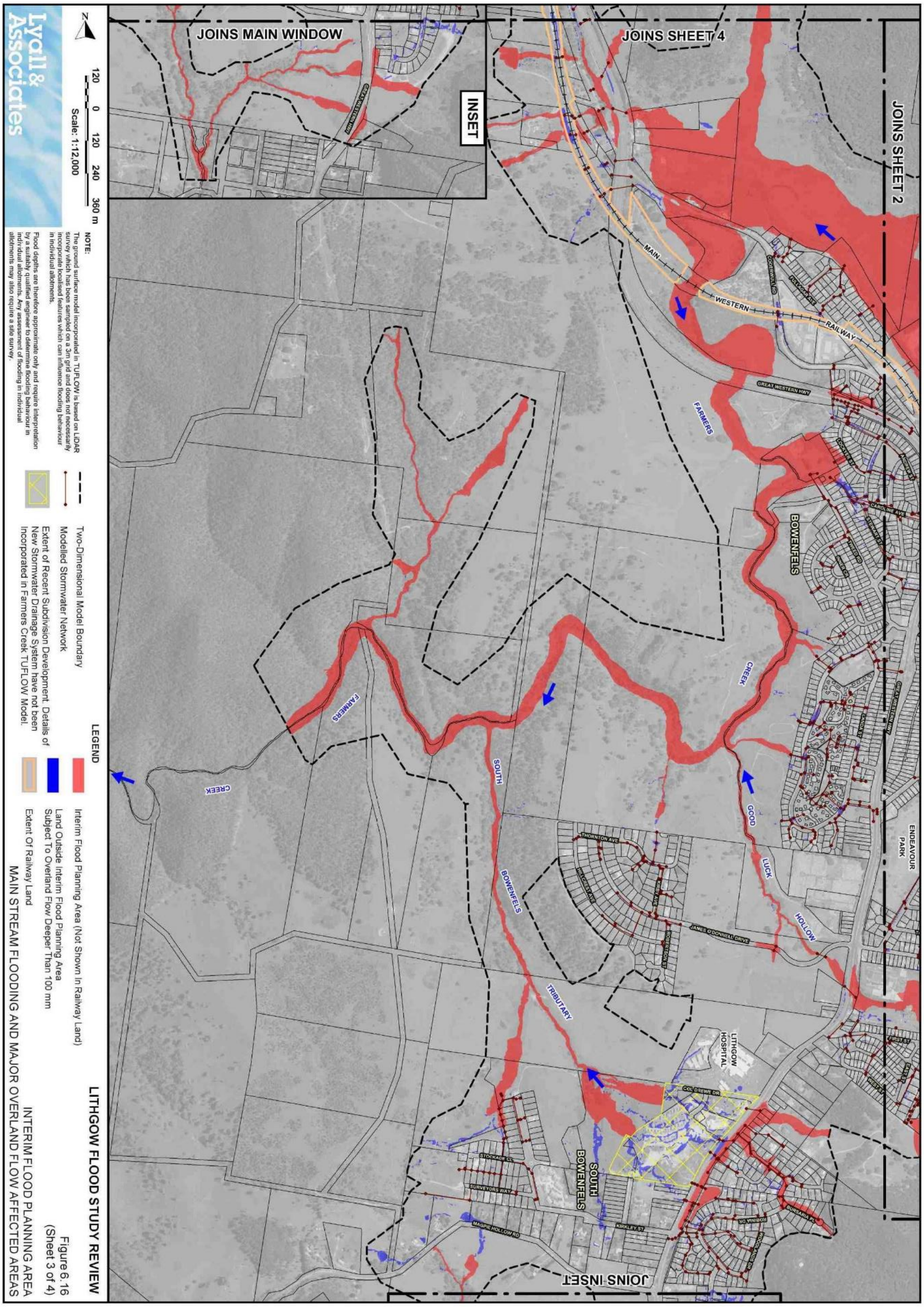
SHEEDYS GULLY
HASSANS WALLS
ENDEAVOUR PARK
LITTLETON
SOUTH LITTLETON
WESTERN RAILWAY
MAIN
FARMERS
TRIBUTARY
GULLY
Lyall & Associates
Scale: 1:12,000
120 0 120 240 360 m
NOTE:
The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 3m grid and does not necessarily model all features which can influence flooding behaviour in individual allotments.
Flood depths are therefore approximate only and require interpretation by a suitably qualified person to determine flood depth in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.
LEGEND
Two-Dimensional Model Boundary
Modelled Stormwater Network
Interim Flood Planning Area (Not Shown In Railway Land)
Land Outside Interim Flood Planning Area Subject To Overland Flow Deeper Than 100 mm
Extent Of Railway Land
LITHGOW FLOOD STUDY REVIEW
Figure 6.16 (Sheet 2 of 4)
INTERIM FLOOD PLANNING AREA
MAIN STREAM FLOODING AND MAJOR OVERLAND FLOW AFFECTED AREAS


LITHGOW FLOOD STUDY REVIEW
Figure 6.16
(Sheet 3 of 4)
INTERIM FLOOD PLANNING AREA
MAIN STREAM FLOODING AND MAJOR OVERLAND FLOW AFFECTED AREAS
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Extent Of Railway Land
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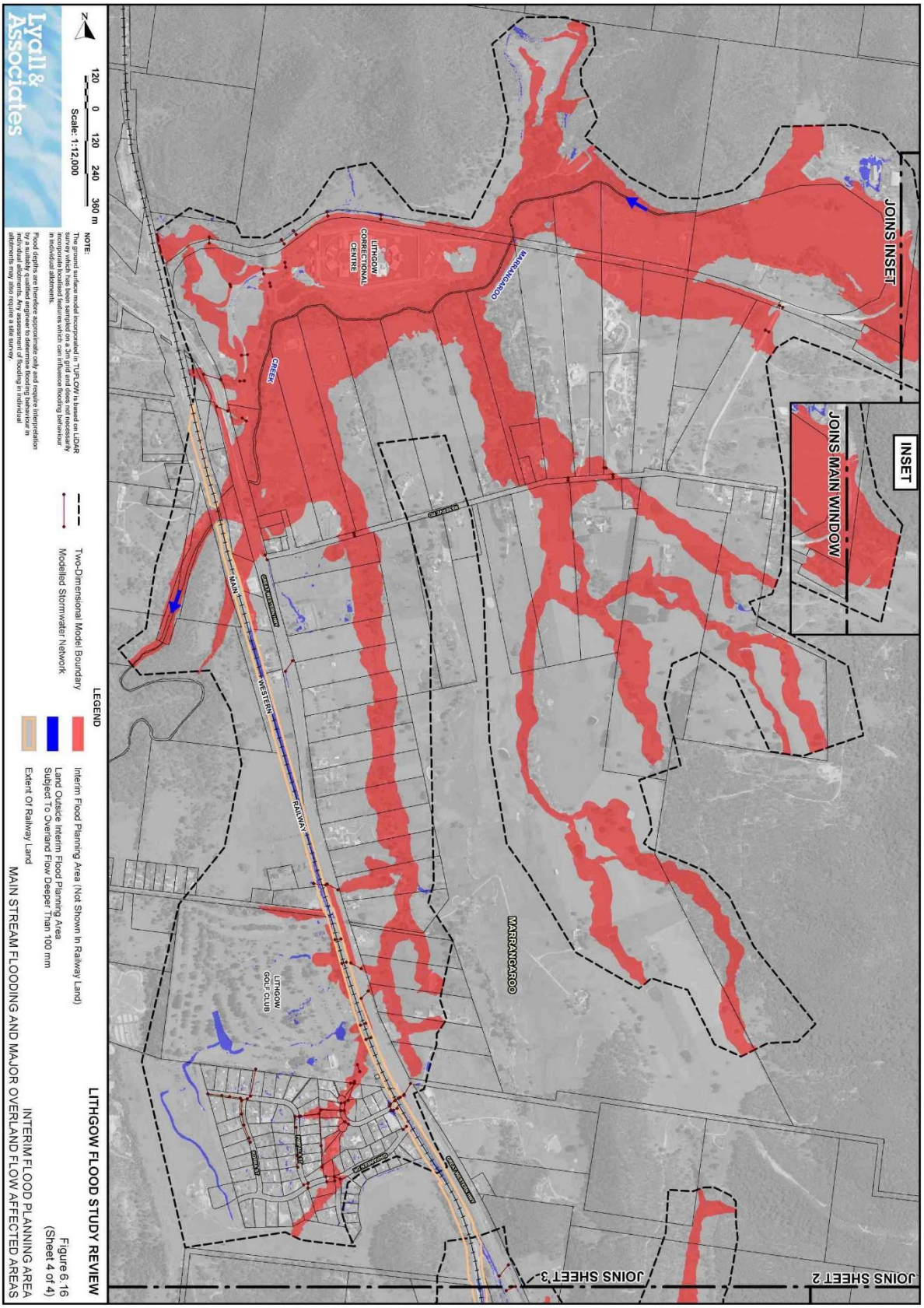
Extent of Recent Subdivision Development. Details of New Stormwater Drainage System have not been Incorporated in Farmers Creek TUFLOW Model.
NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 3m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.
Scale: 1:12,000
120 0 120 240 360 m
N
Lyall & Associates
JOINS MAIN WINDOW
INSET
JOINS SHEET 4
JOINS SHEET 2
JOINS INSET
MAIN WESTERN RAILWAY
GREAT WESTERN HWY
FARMERS CREEK
BOWENFELS
SOUTH BOWENFELS TRIBUTARY
GOOD LUCK HOLLOW
ENDEAVOUR PARK
LITHGOW HOSPITAL
THORNTON AVE
JAMES O'DONNELL DRIVE
COL DREWE DR
STOCKADE CL
SURVEYORS WAY
MAGPIE HOLLOW RD
SOUTH BOWENFELS


JOINS INSET
INSET
JOINS MAIN WINDOW
JOINS SHEET 3
JOINS SHEET 2
LITHGOW CORRECTIONAL CENTRE
MARANGAROO
CREEK
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MARANGAROO
Lyall & Associates
Scale: 1:12,000
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Extent Of Railway Land
LITHGOW FLOOD STUDY REVIEW
Figure 6.16 (Sheet 4 of 4)
INTERIM FLOOD PLANNING AREA
MAIN STREAM FLOODING AND MAJOR OVERLAND FLOW AFFECTED AREAS