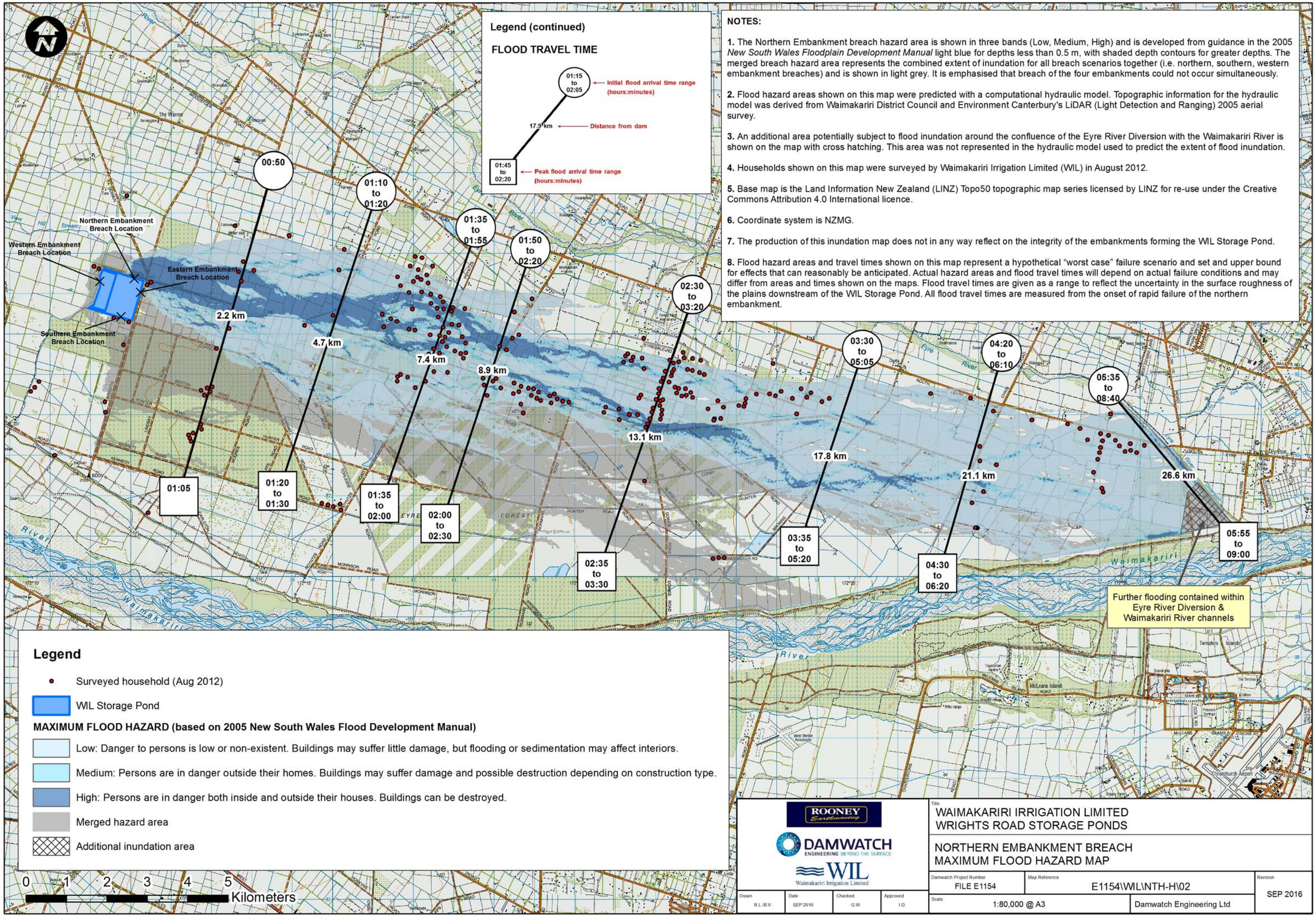

Legend (continued)
FLOOD TRAVEL TIME
01:15 to 02:05
Initial flood arrival time range (hours:minutes)
17.9 km
Distance from dam
01:45 to 02:20
Peak flood arrival time range (hours:minutes)
NOTES:
1. The Northern Embankment breach hazard area is shown in three bands (Low, Medium, High) and is developed from guidance in the 2005 New South Wales Floodplain Development Manual light blue for depths less than 0.5 m, with shaded depth contours for greater depths. The merged breach hazard area represents the combined extent of inundation for all breach scenarios together (i.e. northern, southern, western embankment breaches) and is shown in light grey. It is emphasised that breach of the four embankments could not occur simultaneously.
2. Flood hazard areas shown on this map were predicted with a computational hydraulic model. Topographic information for the hydraulic model was derived from Waimakariri District Council and Environment Canterbury's LiDAR (Light Detection and Ranging) 2005 aerial survey.
3. An additional area potentially subject to flood inundation around the confluence of the Eyre River Diversion with the Waimakariri River is shown on the map with cross hatching. This area was not represented in the hydraulic model used to predict the extent of flood inundation.
4. Households shown on this map were surveyed by Waimakariri Irrigation Limited (WIL) in August 2012.
5. Base map is the Land Information New Zealand (LINZ) Topo50 topographic map series licensed by LINZ for re-use under the Creative Commons Attribution 4.0 International licence.
6. Coordinate system is NZMG.
7. The production of this inundation map does not in any way reflect on the integrity of the embankments forming the WIL Storage Pond.
8. Flood hazard areas and travel times shown on this map represent a hypothetical "worst case" failure scenario and set and upper bound for effects that can reasonably be anticipated. Actual hazard areas and flood travel times will depend on actual failure conditions and may differ from areas and times shown on the maps. Flood travel times are given as a range to reflect the uncertainty in the surface roughness of the plains downstream of the WIL Storage Pond. All flood travel times are measured from the onset of rapid failure of the northern embankment.
Northern Embankment Breach Location
Western Embankment Breach Location
Eastern Embankment Breach Location
Southern Embankment Breach Location
00:50
01:10 to 01:20
01:35 to 01:55
01:50 to 02:20
02:30 to 03:20
03:30 to 05:05
04:20 to 06:10
05:35 to 08:40
05:55 to 09:00
01:05
01:20 to 01:30
01:35 to 02:00
02:00 to 02:30
02:35 to 03:30
03:35 to 05:20
04:30 to 06:20
2.2 km
4.7 km
7.4 km
8.9 km
13.1 km
17.8 km
21.1 km
26.6 km
Further flooding contained within Eyre River Diversion & Waimakariri River channels
Legend
Surveyed household (Aug 2012)
WIL Storage Pond
MAXIMUM FLOOD HAZARD (based on 2005 New South Wales Flood Development Manual)
Low: Danger to persons is low or non-existent. Buildings may suffer little damage, but flooding or sedimentation may affect interiors.
Medium: Persons are in danger outside their homes. Buildings may suffer damage and possible destruction depending on construction type.
High: Persons are in danger both inside and outside their houses. Buildings can be destroyed.
Merged hazard area
Additional inundation area
0 1 2 3 4 5 Kilometers
ROONEY Earthmoving
DAMWATCH ENGINEERING BEYOND THE SURFACE
WIL Waimakariri Irrigation Limited
Title
WAIMAKARIRI IRRIGATION LIMITED
WRIGHTS ROAD STORAGE PONDS
NORTHERN EMBANKMENT BREACH
MAXIMUM FLOOD HAZARD MAP
Damwatch Project Number
FILE E1154
Map Reference
E1154\WIL\NTH-H\02
Revision
SEP 2016
Scale
1:80,000 @ A3
Damwatch Engineering Ltd
Drawn
R.L./B.V.
Date
SEP 2016
Checked
G.W.
Approved
I.D.